WAVE ELECTRONICS - The Best Mail Order Service for the CPC

WAVE ELECTRONICS, DEPT AA9405

1 Buccleuch St, Barrow-in-Furness, Cumbria LA14 1SR

TURN YOUR COLOUR MONITOR INTO A FULL COLOUR T.V.

This MP-3 is an excellent unit which fits underneath your monitor and allows TV reception and also allows the use of other video games consoles!
3 versions available
Please check monitor model number.

CTM640 - £54.99 - Model MP-3
CTM644 - £49.99 - Model MP-3PSU
CM14 - £59.99 - Model MP-3+

Word Processing has never been so easy!

WAVE Electronics and Tasman software can now bring you a ultimate deal to turn your CPC into a professional word-processing system.

TasWord 464D - The Ultimate Word Processor for the CPC464 with disk drive TasWord 6128 - The Ultimate Word Processor for the CPC6128 .

TasSpell - Spelling Checker for Tasword 464D and TasWord 6128
Tasprint - Printer Enhancement fonts for Tasword 464D and TasWord 6128

TasWord 6128	£19.99
TasWord 464D	£19.99
TasSpell	£17.99
TasPrint	£17.99
TasWord 6128 with TasSpell	£33.99
Tasword 6128 with TasPrint	£33.99
TasWord with 6128 TasPrint & TasWord Spell	£42.99

HIGH ENERGY GAME PACK!
Light Corridor, Mystical, Crazy Cars 2, Pinball Magic & Shufflepack Cafe on disk for only £9.99

INTEGRAL GAME PACK!
Lotus Esprit, Toyota Celica, Super Scrabble, Super Cars on disk for only £6.99

LES COLLECTORS GAME PACK!
Lotus Esprit, Ghouls 'N' Ghosts, Switchblade, Supercars, Show of the Beast on disk for only £9.99

CPC BUDGET WORD PROCESSING SOFT 999D PACK
INCLUDES 11 GAMES & A WORD PROCESSOR ON DISK FOR ONLY £6.99

HARDWARE & PERIPHERALS

FD-1, CPC664/6128 Second Drive	£79.95
FD-1+, CPC6128+ Second Drive	£71.95
FD-1DD1, CPC464/464+ Second Drive	£79.9
MP-1, CPC464 to TV & PSU	£49.99
MP-1F, CPC464 to SCART TV	£13.99
MP-2F, CPC664/6128 to SCART TV	£15.99
RS232CPC, CPC RS232 Interface	£29.99
RS232CPC+, CPC+ RS232 Interface	£34.99
64K RAM Expansion CPC 464	£41.99
AM40025, CPC464 Upgrade ROM	£24.99

CPC SYSTEM DISKS

CPC6128, CP/M Plus	£14.99
CPC6128, DR Logo & Help	£11.99
CPC6128+, CP/M Plus	£8.99
CPC6128+, DR Logo & Help	£8.99
CPC464, CPM2.2	£10.99

SEGA MEGADRIVES

Megadrive 1 plus Sonic the Hedgehog & Mega Games 3	*only* £139.99
Megadrive Controllers	£7.99
Megadrive/Game Gear PSU	£14.99
Game Gear Car Adaptors	£8.99
Sega Hints & Tips Book	£2.99

BLANK DISKS

CF2 3" Amsoft, Box of 10	£14.50
CF2 3" Ex- Software House. Pkt of 10	£8.99
CF2 3" Plastic Cases. Pkt of 10	£4.99
3.5" Double Sided Double Density Pkt 10	£4.99
3.5" Double Sided High Density Pkt 10	£7.99

LEADS & CABLES

CTM to Megadrive	£12.99
CTM to Spectrum +2/+3	£12.99
CTM to Megadrive 2	£17.99
CTM to Amiga	£12.99
CM14 to Megadrive	£14.99
CM14 to Megadrive 2	£18.99
CM14 to Amiga	£14.99
CM14 to Spectrum +2/+3	£14.99
CM14 to CD Player	£4.99
CPC Joystick Splitter	£8.99
Joystick Extension	£8.99
CPC to Printer 1.5M	£7.99
CPC to Printer 2.0M	£9.99
CPC+ to Printer	£9.99
CPC to Video BNC	£6.99
CPC to Video Phono	£6.99
CPC 6128 to Cassette	£3.49
Expansion Port Adaptor	£9.99
RS232 to NC100	£9.99
RS232 to PC Null Modem	£9.99
DL-2 CPC6128 to FD-1	£7.99
DL-26128 CPC6128+ to FD-1	£9.99

CONNECTORS & CABLE

6 Pin Din Plug	£1.49
6 Pin Din Socket	£1.49
8 Pin Din Plug	£1.59
8 Pin Din Socket	£1.59
8 Pin Din Plug - Megadrive	£1.99
Phono Plug x 2	£1.09
Phono Socket x 2	£1.09
50 Way Edge Board	£1.99
9 Pin Male inc Hood	£1.99
9 Pin Female inc Hood	£1.99
23 Pin Male inc Hood	£2.49
23 Pin Female inc Hood	£2.49
25 Pin Male inc Hood	£1.99
25 Pin Female inc Hood	£1.99
SCART Plug	£2.50
Cable 6 Core 1 Metre	£1.50
Cable 8 Core 1 Metre	£2.00
Cable 10 Core 1 Metre	£2.50
Cable 25 Core 1 Metre	£3.00

RIBBON CABLE CONNECTORS

IDC 34 Way	£1.49
Edge Board 34 Way	£1.99
Ribbon Cable 34 Way 1ft	£2.99
50 Way Centronics Plug	£3.99

THIS MONTH'S SPECIALS

Mouse Mats	£1.75
Quickshot 2 Turbo Joysticks	£7.99
3.0"/3.5" 40 Capacity Disk Box	£5.99
3.0"/3.5" 100 Capacity Disk Box	£6.99
Soft 999D - 12 Games on Disk	£6.99
CPC464/6128 Scart Modulator inc PSU	£15.99

EDUCATIONAL SOFTWARE

FUN SCHOOL 1 UNDER 5's
CPC DISK £5.99
FUN SCHOOL 1 5-7's
CPC DISK £5.99
FUN SCHOOL 1 8-12's
CPC DISK £5.99
FUN SCHOOL 3
UNDER 5's
5 TO 7's
OVER 7's
CASSETTE £8.99 EACH
DISK £12.99 EACH
FUN SCHOOL 4
UNDER 5's
5 TO 7's
7 TO 11's
CASSETTE £9.99 EACH
DISK £13.99 EACH

CLEARANCE COLUMN

All Disk Games below £1.99
Cisco Heat
Rock 'n' Roll
Chartbusters
Sweevo's World

All Disk Games below £3.99
Paperboy 2
Bonanza Bros
Quartet

All Below as Priced

Ten of the Best 1	£6.99
Ten of the Best 2	£6.99
Quartet - 4 Games	£5.99
Disk 50, 50 Games	£7.99
Blue Ribbon Games	£6.99
Turtles - Spanish	£1.49

CPC Cassette Games

Turtles - Spanish	£1.49
Turtles Coin Op	£1.99
Back to the Future 2	£1.49

CUSTOMER NOTICE
DMP2000 RIBBONS AND EX-SOFTWARE 3" DISKS BACK IN STOCK!

PRINTER RIBBO

Star LC10 Pkt 2	
Star LC10, Pk 5	
Star LC2410/LC24200, Pkt 2	
Star LC2410/LC24200, Pkt 5	£
Amstrad DMP2000, Pkt 2	
Amstrad DMP2000, Pkt 5	£
Amstrad PCW8256/8812, Pkt 2	£5.99
Amstrad PCW8256/8512, Pkt 5	£14.99
Amstrad PCW9512, Pkt 2	£4.99
Amstrad PCW9612, Pkt 5	£10.99
Citizen 1200, Pkt 2	£6.99
Citizen 1200, Pkt 5	£11.99

SERIOUS SOFTWARE

Touch 'n' Go - Typing Tutor - 6128 & 6128 Plus Only	£6.99
Tasword 6128 - The Best CPC Word Processor	£19.99
Tasword 6128 & Tas Spell - Word Pro & Spell Check	£33.99
Tasword 6128, Tas Spell6128 & Tas Print 6128	£42.99
Tasspell 6128 - Tas Spell Spell Checker	£19.99
Tasprint - Printer Fonts For Tasword 6128	£19.99
Microfile/Word - Word Pro & Database	£5.99
Discology V3.3 - CPC Disk Utilities, Disk Copier/Backup Fast & Ultra + Disk Editor etc	£6.99
Electric Lantern Show - Printer Utilities	£4.99
Art Studio Colour Printer Driver	£6.99
Micro Design - Desktop Publisher	£14.99

PHONE OUR SALES LINE ON: 0229 870000

Storming into the second decade of the CPC

AMSTRAD ACTION

ISSUE No.104
May 1994
£2.95

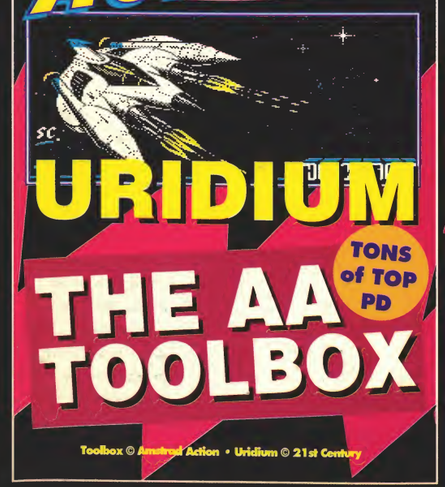
And look what else you get...

Uridium
The most challenging shoot-'em-up ever

Toolbox
A specially-compiled collection of the very best serious PD

The first 10 YEARS

Amstrad CPC 464, CPC 6128, CPC 464 Plus
MAY 1994
Serious ACTION



URIDIUM

THE AA TOOLBOX

TONS of TOP PD

Toolbox © Amstrad Action • Uridium © 21st Century

CPC - this is your life!

Relive the first decade of the world's greatest home computer... page 10.

Plus
Public Inquiry
Is PD living up to its promise?

Future PUBLISHING
Your guarantee of value
NOT an official Amstrad publication

05
9 770954 806041

Line-up

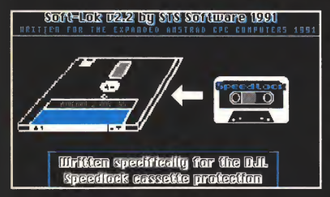
Serious stuff

20 AA guide to: BASIC
Things go a bit loopy in the latest installment of AA's Basic programming series, as the commands FOR and NEXT make their first appearance.

24 AA guide to: Machine Code
Formatting discs, verifying discs and other things to do with disc operations and machine code form the underlying thematic metaphoric content this month.

26 Review: Home Teacher
Home Teacher is a new homebrew educational package aimed at 4-6 year olds, but how does it match up to the classic *Fun School* series ?

26 Review: Soft-Lok
"Backing up is hard to do, shooby doo, down down," as the Partridge Family once almost said. But it can be a lot easier if you use a backing up device like *Soft-lok*.



Main feature

10 A decade of the CPC
Yep, you'd better believe it – it's been 10 years since the CPC was launched and revolutionised home computing as we know it. Rod Lawton takes a very personal (ie, extremely biased) look back over the highs and lows of the CPC's career so far...

27 Review: Basic Idea
If you reckon you've got the hang of the basics of Basic but you want to start programming something a bit more complex then Campursoft's latest release should be right up your street.

28 Type-Ins
This month we've got a couple of great little games for you to type in – *Helloween* and *Meteor Storm 3* – so give those fingers some exercise.

34 Techy Forum
Silencing a noisy tape deck, connecting up a CPC to a Psion, recommending cheap printers, giving machine code tips, scraping sesame seeds out of Dave's keyboard – it's all in a day's work for Richard Fairhusrt. Whatever the problem, this man has the answer.

Bits'n'pieces

4 Covertape
There's a lot of stuff on the covertape this month, so if you want to know how to get blasting or how to get those utilities to work, these are the pages you need to turn to.

8 Amscene
The latest in the continuing saga of Quantum Computing, news of a follow-up to last year's successful UAUG convention and loads more (as they say).

9 Amscene Directory
The most comprehensive list of CPC services anywhere. If they aren't mentioned here, they probably haven't written to us saying they'd like to be mentioned here (we're not omnipotent).

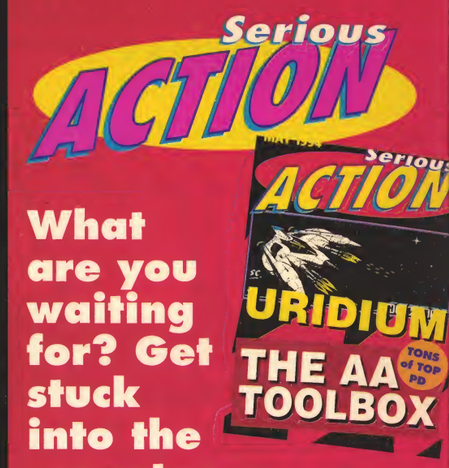
15 AA Special Investigation Public Inquiry
The philosophy behind public domain software sounds great – free programs that anyone can copy. But what is the reality? Can PD software fill the gap left by the major software companies pulling out of the market? Are the libraries doing all they can to support the scene? Simon Forrester investigates.

23 Back Issues
The more you buy the more you save – that's the special offer we've got going in our Back Issues service at the moment, so take advantage of it while stocks last.

46 Reader Ads
Bargains, pen friends, services, user groups, fanzines, personal messages – basically, if you can fit it on the form and it's legal we'll print it.

47 Letters
That mad man with the breasts is back again, and this time he's topless. But don't panic, believe it or not there are some more sensible letters as well.

47 Next Month
There's a new look to the Next Month page as the strangely popular Trump Cards and Separated at Birth find a new home. But we'll still be doing all that usual predicting what'll be in next month's issue lark (using a Ouija© board, a piece of seaweed and couple of used matches – no wonder it rarely works).



What are you waiting for? Get stuck into the covertape...

Uridium

Get ready for classic shoot-'em-up in the depths of space. It's just you against a fleet of enemy ships that never know when to give in. Can you destroy the enemy fleet, the alien defenses and, ultimately, the entire alien fleet? Only the best (and the cheats) can survive...

AA Toolbox

There are few machines that have a such a powerful version of BASIC built-in as the CPC. But with the amazing *Amstrad Action Toolbox* you can add enough extra commands to BASIC to make your own programs even more classy. Watch out, Type-Ins...

Turn the page for full details on the covertape.

Leisure zone

30 Reviews: Public Image
This issue has turned into an unofficial public domain special, what with loads of the stuff on the covertape and a huge investigive feature into the scene, but you'll find Keith Woods' reviews of all the latest PD software in every issue.

32 Adventures: The Examiner
As well as all the usual essential stuff for all CPC text adventurers – game reviews, Lords and Ladies, Cluepot, that sort of stuff – there's a special bonus this month as we print the complete map to *Bestiary*.

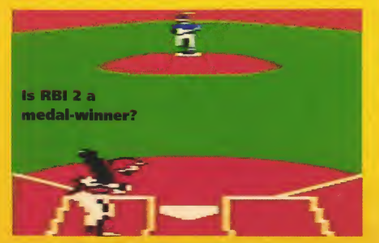
38 Review: Fluff
Hang on, I'm getting a sense of deja vu. Oh, yeah, this review was supposed to be in last month's issue. But author Rob Buckley decided that there was still room for improvement so a finished version didn't arrive in time. This month we discover if the extra work has made *Fluff* the greatest CPC platformer of 'em all.

Forcefield is one of the games reviewed in this month's Public Image.

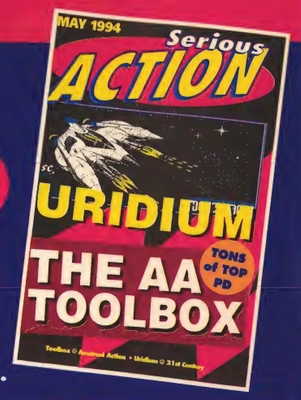
Fluff finally gets a full review this issue – will it live up to the hype?

40 Round up: Sports sims
It's the Amstrad Olympics where Lee Rouane hands out the gold, silver and bronze medals (and a couple of wooden spoon) to outstanding (and outstandingly bad) sports sims.

41 Game tips: Cheat Mode
More essential tips, cheats and pokes for the gameplayingly challenged. *Chuckie Egg*, *Lords of Chaos* and *UN Squadron* are among the games that get blown wide open.



Serious ACTION



Simon takes you on a guided tour around this month's covertape...

Toolkit

Welcome to *AA*'s set of utilities for BASIC and machine code programmers. You've probably seen BASIC extensions like this a thousand times before; usually they add a few commands, most of which you can live perfectly well without, and disappear again. But we reckon you'll find the *AA Toolkit* genuinely useful. Most of them will work equally well no matter what CPC you have. A few are for disc owners only, and a couple are only to be used with cassettes. Similarly, a few commands are designed for systems with over 64k, and there are some commands especially suited for the 464. Something for everyone, basically.

How does it work?

The commands that *Toolkits* adds to BASIC are called RSXs, which is techie jargon for Resident System Extensions, which is techie jargon for something that begins with a "|" (bar) symbol. For example, one of the commands is called |MEMORY. You can use it like any normal command, as in:

```
10 |MEMORY
```

Or you can use it just on its own. Some commands, like BASIC ones, take arguments – that is, you can't just put the command down and expect it to do something, but you have to supply a few numbers (or whatever) for it to work from. The thing to note here about RSXs is that they must have a comma directly after the command name (yes, it looks odd), for example:

```
|PUTKEY,65
```

464 owners ahoy!

As you'll know if you have a disc drive, the 464 is spectacularly inept at handling bar commands. For example, to erase a file from disc on the 464, you have to type:

```
a$="filename":|ERA,@a$
```

instead of the simpler BASIC 1.1 equivalent:

```
|ERA,"filename"
```

Remember that this applies to the *AA Toolkit* commands too (however, one of the commands should help to free you from all this hassle...).

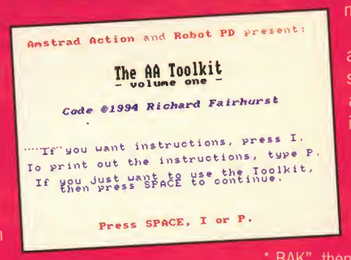
Command line interpreter

```
|CLI                          (all machines)
a$="command":|CLI,@a$        (BASIC 1.0)
|CLI,"command"               (BASIC 1.1)
```

CLI stands for Command Line Interpreter. This, basically, means that you can type in a command and it will obey it.

"Big deal!" shout several thousand readers. "BASIC does that already!" Hang about. This has several advantages. For a start, if you just type |CLI, you'll be put in a mode where you can type RSX commands (ie, those usually prefixed with '|') to your heart's content. It's easier than from BASIC, because you can use spaces instead of commas to separate items, and you needn't bother with the speech marks (unless, of course, you have a space in the item). Let's say we want to rename the file OLDIE.BAS to NEWBIE.BAS. 464 owners would usually have to suffer this:

```
a$="OLDIE.BAS":b$="NEWBIE.BAS":|REN,
@b$,@a$
```



However, owners of other CPCs and Pluses could get away with:

```
|REN,"NEWBIE.BAS","OLDIE.BAS"
```

With |CLI, though, it's a much easier:

```
REN NEWBIE.BAS OLDIE.BAS
```

To quit from command mode, press ESC.

|CLI has other advantages. If you supply it with an argument, it won't go into the command mode, but will instead try to execute the string you supplied as a command. So, if a$ contained "ERA *.BAK", then typing |CLI,@a$ would delete all the backup files on a disc.

Batch operations

```
|EXEC                         (all machines)
a$="filename":|EXEC,@a$      (BASIC 1.0)
|EXEC,"filename"             (BASIC 1.1)
```

|CLI acts on what you type in at the keyboard. |EXEC is similar, but takes its orders from a text file (perhaps created with a word-processor or text editor) on your tape or disc. This means that you can write a list of RSX commands to execute, save them (say) in the file "COMMANDS.BAT", and then execute them using:

```
|EXEC,"COMMANDS.BAT"
```

For ultimate convenience, if you just type |EXEC on its own, it will try to load and execute a file called #EXEC.BAT.

Possible uses? Well, you could set up a file to set up your favourite colours and function key definitions, for example, erase all your backup files, and then leap into *Protext*.

Screen commands

```
|EDIT,character value        (all machines)
a$="character":|EDIT,@a$     (BASIC 1.0)
|EDIT,"character"            (BASIC 1.1)
```

Working out character designs manually for BASIC's SYMBOL command can be a chore at the best of times, downright annoying at the worst. But what is that in the distance? Could it be a heroic RSX decked in shades and riding a Harley-Davidson here to save the day? Yes, it is. But please don't laugh at the poor thing.

Select a character to edit using one of the above commands (the first takes an ASCII code – 65 for capital A or 240 for an up arrow – as an argument, whereas the others take the actual character), and the character will appear. You can move your cursor using the cursor keys, invert pixels with COPY, and finish with ENTER or RETURN. When you've finished, the appropriate numbers will be displayed on-screen (in hex), ready to be copied into a SYMBOL statement.

Remember that, to define a character, you must have set SYMBOL AFTER appropriately beforehand (ie, if you want to define character 100, you'll need to have typed SYMBOL AFTER 100 or less). An error will appear if you haven't. The standard loader for the *Toolkit* sets SYMBOL AFTER 32, so you should be okay.

```
a$="text": |DOUBLE,@a$       (BASIC 1.0)
|DOUBLE,"text"               (BASIC 1.1)
```

These print double-height text. You must have set SYMBOL AFTER 254 or less beforehand. The default is SYMBOL AFTER 240 when you turn on, and the *AA Toolkit* sets it to SYMBOL AFTER 32, so it shouldn't be a problem.

```
a$="text":|WRITE,[style,]@a$   (BASIC 1.0)
|WRITE,[style,]@a$            (BASIC 1.1)
```

Writes text to the screen in a specified style. The style is expressed by a number, which can be any of these: 1 – bold, 2 – thin, 4 – italics, 8 – underlined, 16 – flippy (upside-down). Or you can add two (or more) together for a combination of styles. You can even change style half-way through some text. Use CTRL-B to toggle bold on or off, CTRL-T for thin, CTRL-I for italics, CTRL-U for underline, and CTRL-F for flippy. If you're going to do this later on in the text, you can leave out the number in the command if you want, so the text will start out plain (like writing 0).

This command relies on at least SYMBOL AFTER 255 being set (see above).

```
|MODE,mode number   (all machines)
|INK,ink,colour     (all machines)
|BORDER,colour      (all machines)
```

Yes, these do work in the same way as the standard BASIC commands. We've just supplied you with them as RSXs so that you can use them from an |EXEC file.

464 commands

```
|FRAME
|CURSOR[,system switch],user switch
|CLEAR.INPUT
|COPY.CHR,@variable%
|GRAPHICS.PEN,ink
|GRAPHICS.PAPER,ink
```

These pretty much emulate the commands to be found in BASIC 1.1, for the benefit of those struggling over Type-Ins that don't work on the 464. Simply replace CLEAR INPUT with |CLEAR.INPUT, for example, and hey presto.

|COPY.CHR works in a slightly different way to the 6128's COPYCHR$ function. Instead of a$=COPYCHR$(#0), you would write:

```
a%=0:|COPY.CHR,@a%: a$=CHR$(a%)
```

➤

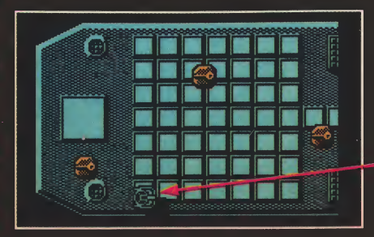
Uridium

The Pope liked it. Okay, I've no idea whether he's even clapped eyes on a CPC, but it's new, isn't it? When was the last time you had the Pope's seal of approval on anything? Okay, okay, so he didn't use the words, "I like *Uridium*", but I bet he would have had he played it.

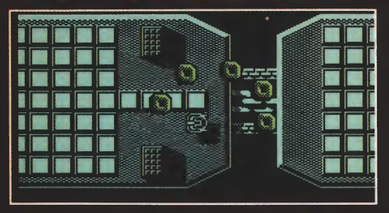
You see, *Uridium* is one of the all-time greats in 8-bit computing. *Uridium* is to the CPC what Catholicism is to the Pope, which is why I'm sure he'd like it if he was a CPC fan. Okay, so the Pope never really likes anything when it comes down to it, but he's the Pope, and it's part of the job.

I can speak for the Pope when I say that you have to attack the alien mothership, destroying every ship on its landing strips and, in fact, everything else that can possibly be destroyed before screaming off to the next ship. There are various surprise elements in the alien defences, but if I told you, it'd ruin the fun, wouldn't it?

You can use either joystick or keys, using directional controls. To turn the ship around, simply push your joystick in the opposite direction, and you'll turn around. As always with directions, there are four main ones, being up, down, left, and right. Would you like me to explain how to load it? Would you really like me to go that far?



This is you, and you're about to die.

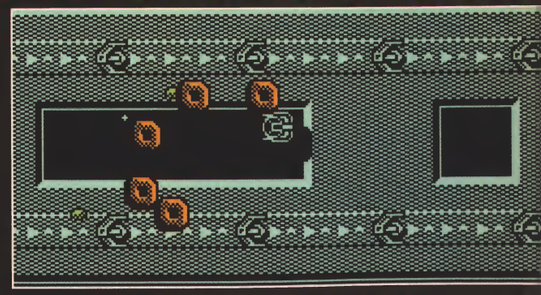


They've gone into ring doughnut formation.

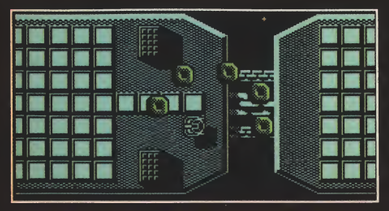
Insert your tape on the side clearly marked *Uridium*, hold down CTRL and the small ENTER key, and follow the on-screen instructions. If you've got a disc drive attached to your machine (or even inside it), you'll need to type | (that's above the @ symbol) and TAPE, pressing RETURN afterwards, before the CTRL & Enter thing.

The joystick's that thing coming out of the side of your machine (or the back if you've got a 464), that's either tall and phallic, covered in lots of big red buttons, or a small beige rectangle with a wimpy-looking cross on it if you own a Plus.

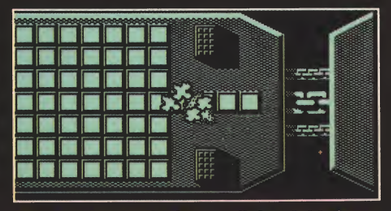
Happy now? I bet the Pope is.



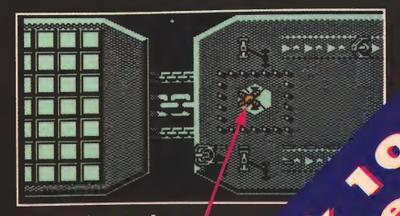
These are the runways that you have to trash. So get trashing, man...



Derek panicked – the doughnuts attacked...



Shortly afterwards the cornflakes laid siege.



The X wing. Bad man.

Disk 104 Token

Loading instructions

Getting started

To load up either side of the tape, simply rewind it, hold down CONTROL and press ENTER. Owners of 6128s or 664s will have to switch their machines to tape by typing |TAPE first.

Tape to disk offer

If you've got a disk drive and you want to get a disk version of this month's tape it's easy. Whip out your scissors and cut off that token at bottom of this page, chuck it in an envelope along with your name and address and a cheque or postal order for £2 made out to Ablex Audio Video, then send off the whole kit'n'kaboodle to:

AA104 Disk Offer,
Ablex Audio Video,
Harcourt, Halesfield 14,
Telford, Shropshire TF7 4QD.

Loading troubles?

We make the greatest efforts to ensure our covertapes work properly, but if you've tried all that and your tape's still not loading then pop it in the post (with a note telling us your name, address, type of CPC you use and a brief description of the problem) to:

AA104 Covertape returns,
Ablex Audio Video,
Harcourt, Halesfield 14,
Telford, Shropshire TF7 4QD
☎ 0952 680131

NB When returning faulty tapes could you please also include a stamped, self-addressed envelope. Thank you.

Please do not return faulty tapes to the AA office. There is no point. We cannot replace them here. Send them to Ablex, please.

Note that the "a%=0" is important (although the variable can be called anything, of course).

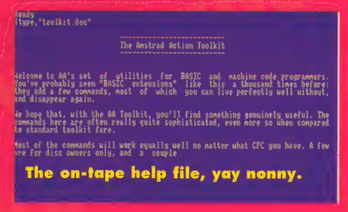
Memory commands

|MEMORY (all machines)

This draws a graphical representation of memory very, very quickly. Coloured bits indicate there's something in the memory at that point, whereas blank bits suggest that it's empty.

|DUMP,start[,finish] (all machines)

This displays a section of memory on the screen, from the start address to the finish address. If no finish address is specified, then a short display will be produced from the start address. When displaying long sections of memory, the computer pauses every so often and waits for you to press a key.



|FIND,start,finish,byte (all machines)

Looks through memory for the occurrence of a particular byte, and prints up all the places at which it occurs.

|BANK,bank-switch (128k systems)

For use with the following commands, this command selects which bank of extra RAM is to be used. The standard 6128 extra 64k can be selected with |BANK,&C0. If you have a 256k expansion, |BANK,&C8, |BANK,&D0, and |BANK,&D8 may prove useful.

|BANK.READ,from,to,length (128k systems)

This copies a section of memory from the currently selected bank of extra memory to the specified address in the main 64k, where you can wreak your wicked ways on it.

|BANK.WRITE,from,to,length (128k systems)

Unsurprisingly, this is the opposite of the previous command, and copies memory from the main 64k to the extra memory.

|COPY,from,to,length (all machines)

This copies the specified portion of memory (in the main 64k). For example, to copy the contents of screen memory (which starts at &C000, and is &4000 bytes long) to &2000, you could type:

```
|COPY,&C000,&2000,&4000
```

|FILL,address,length,byte (all machines)

This fills a section of memory with the given byte, obliterating everything else underneath. |FILL &C000,&4000,240, for example, will fill screen memory with ink 1.

|CALL,address (all machines)
|AF,value: |BC,value: |DE,value
|HL,value: |IX,value: |IY,value

The firmware has a lot of good routines in it, but many are not easily accessible from BASIC. These routines will help you to use them to the full. All you have to do is set up the required registers (so, to set HL to &4350, type |HL,&4350), and then CALL the routine using |CALL,address .

To set the accumulator to 5, you would type |AF,&0500. This also sets the flags register to 0, but the flags are never significant on entering a firmware routine.

File commands

These are the commands that, as opposed to dealing with a block of memory, do various things with either cassette or disc files.

a$="filename":|TYPE,@a$ (BASIC 1.0)
a$="filename":|PTYPE,@a$ (BASIC 1.0)
|TYPE,"filename" (BASIC 1.1)
|PTYPE,"filename" (BASIC 1.1)

These two commands type a file from tape or disc to the screen. |PTYPE prints it on your printer, too. You can pause output at any time by pressing any key, with another key to resume (ESC to quit).

One useful feature of this is that it makes a half-decent job of *Protext* files, meaning that you no longer need to load the word-processor itself to read the files.

a$="filename":|INFO,@a$ (BASIC 1.0)
|INFO,"filename" (BASIC 1.1)

This reads header information from the specified file and displays it in hex – filetype, start address and so on.

a$="filename":|LOAD,@a$,addr (BASIC 1.0)
|LOAD,"filename",addr (BASIC 1.1)

Loads a file into anywhere in (the main 64k of) memory. Unlike BASIC's normal LOAD command, this doesn't worry about HIMEM or other such nonsense.

|HL.WRITE,address,length,sync (cassette)
|HL.READ,address,length,sync (cassette)

Records an area of memory to tape as a headerless file, which is impossible to read if you don't know the sync byte (which should be a number between 0 and 255). Make sure you don't forget it.

Disc commands

|SECTOR.WRITE,address,drive,track,sector
|SECTOR.READ,address,drive,track,sector

These record an area of memory (usually &200 bytes, half a kilobyte) directly to a sector on disc. Be very careful using |SECTOR.WRITE – if used indiscriminately on non-write-protected discs it could mess them up for good. Try experimenting on a disc of CP/M languages or something boring like that. The drive parameter should be 0 for drive A and 1 for drive B.

|USER,user number

This is just like the usual command, except that the 0-15 limit has been removed and you can now select any user area from 0 to 255. 229 is where erased files go to rest before they die forever. Stunning stuff, eh?

Using the commands in your own programs

The file that does all the hard work is called TOOLKIT.RSX. To load it and set up the extra commands, you would need to use a few lines like this at the beginning of your program:

```
10 SYMBOL AFTER 32
20 MEMORY &7FFF
30 LOAD "TOOLKIT.RSX"
40 CALL &8000
```

Make sure that TOOLKIT.RSX is on the current disc or tape.

Error messages

There are a number of error messages that the *AA Toolkit* commands might generate. Here's what they mean:

CASSETTE OVERRUN – The headerless file was not of the right length.

CHARACTER NOT EDITABLE – The current SYMBOL AFTER setting is inappropriate for the command you are trying to carry out.

COULD NOT SET KEY – You've tried to set too many function keys at once, and the computer has run out of memory for them.

DISC ERROR – Five hundred elephants came charging through the undergrowth (well, really).

ESCAPE PRESSED – A tape operation was interrupted by you pressing ESC.

FILE ERROR – Some sort of error occurred while trying to access a file.

ILLEGAL PARAMETER COUNT – You haven't supplied the right number of parameters (or arguments) for a command.

READ ERROR B (CRC ERROR) – Bad news. Bad, bad news. Bad, bad, bad news (get the idea?) This means that your headerless file has probably been messed up.

UNKNOWN COMMAND – |CLI or |EXEC is trying to find a command you have given it and failing miserably, poor thing.

|CAT,drive

Catalogues the disc in the specified drive: 0 for drive A and 1 for drive B. This enables you to quickly catalogue a drive which you're not using at the moment, without having to go through the rigmarole of |B:CAT:|A.

Miscellaneous commands

a$="string":|KEY,exp.token,@a$ (BASIC 1.0)
|KEY,expansion token,"string" (BASIC 1.1)

This sets up a function key (usually) to generate a string of characters: |KEY,0, "|CLI"+CHR$(13), for example, will set f0 to enter CLI mode. This is no different from the standard Amstrad KEY command, but, again, is provided for use in |EXEC files. In an |EXEC file, you would write the above as:

```
KEY 0 |CLI!M
```

|PUTKEY,character value (all machines)
a$="character": |PUTKEY,@a$ (BASIC 1.0)
|PUTKEY,"character" (BASIC 1.1)

Pretends that a key has been pressed, so that next time you come to read the keyboard (using INKEY$, INPUT or similar), that key will appear. You can only "put back" one key at a time before reading a key. Useful for when certain keys (detected with INKEY$) trigger off a line of INPUT beginning with that letter.

Copyright

You are welcome to use the *AA Toolkit* (TOOLKIT.RSX) in your own programs – after all, that's what it's here for. An acknowledgement along the lines of, "Uses *AA Toolkit* from *Amstrad Action* and Robot PD" would be appreciated. The *Toolkit* may not be copied as a toolkit, rather than as part of a program, without the permission of the author.

WAREHOUSE CLEARANCE!

AMSTRAD GAMES CARTRIDGES FOR THE 6128+/464+/GX4000

WE ARE ABLE TO OFFER THE FOLLOWING GAMES CARTRIDGES AT A SPECIAL OFFER PRICE OF £9.99 (WHILE STOCKS LAST):-

- ★NO EXIT
- ★NAVY SEALS
- ★PRO TENNIS TOUR
- ★BARBARIAN II
- ★BATMAN
- ★OPERATION THUNDERBOLT
- ★SWITCH BLADE
- ★KLAX
- ★ROBOCOP II
- ★PANG

ALL GAMES ARE UNBOXED AND WITHOUT INSTRUCTIONS
DON'T DELAY ORDER TODAY!

AMSTRAD 6128+/464+/GX4000

TROJAN PHAZER GUN WITH SKEET SHOOT CARTRIDGE	£29.99
ENFORCER CARTRIDGE FOR ABOVE.	£14.99
AMSTRAD BURNIN' RUBBER / LOCO BASIC CARTRIDGE	£19.99
AMSTRAD 6128+/464+ INSTRUCTION MANUALS	£14.99
AMSTRAD 464+ COMPUTER WITH MONO STEREO MONITOR	£125.00
AMSTRAD 6128+/464+ KEYBOARD MEMBRANES	£12.99
AMSTRAD PADDLE CONTROLLERS(6128+/464+/GX4000)	£2.50
AMSTRAD 6128+ COMPUTER WITH MONO STEREO MONITOR	£160.00
AMSTRAD GX4000 POWER SUPPLY UNIT	£15.99
AMSTRAD 6128+/464+ PRINTER LEADS	£9.99
AMSTRAD CM14 COLOUR STEREO MONITORS	£125.00
AMSTRAD MM12 MONO STEREO MONITORS	£65.00
AMSTRAD 464+ COMPUTER CONSOLES	£65.00
AMSTRAD 6128+ COMPUTER CONSOLES	£85.00
AMSTRAD 464 LIGHT PEN & SOFTWARE	£19.99

AMSTRAD 464 AND 6128 - GENERAL

AMSTRAD 6128 LIGHT PEN & SOFTWARE	£29.99
AMSTRAD 464 LIGHT GUN & GAMES CASSETTE	£19.99
AMSTRAD 6128 LIGHT GUN & GAMES DISC	£19.99
AMSTRAD GREEN SCREEN MONITOR GT65	£65.00
AMSTRAD CPC CASSETTE MECHANISM WITH TAPE HEAD & MOTOR	£29.99
AMSTRAD 464 CASSETTE HEAD ALIGNMENT KIT	£9.99
AMSTRAD CASSETTE TAPE HEAD DEMAGNETIZER	£9.99
AMSTRAD PRINTER LEAD (34 EDGE CONNECTOR TO CENTRONICS PLUG)	£9.99
AMSTRAD JY2 JOYSTICK	£9.99
AMSTRAD 464 TEACH YOURSELF BASIC TUTORIAL GUIDE WITH TWO CASSETTES	PART 1 £9.99 PART 2 £9.99
AMSTRAD 464 NEW CIRCUIT BOARDS WITH CHIPS/PLUGS ETC (PART No. Z70375)	£34.99
AMSTRAD 6128 CASSETTE LEADS	£5.99
AMSTRAD 464/6128 SPEECH SYNTHESISER WITH STEREO AMPLIFIER & TWO SPEAKERS	£19.99
AMSTRAD MP1 MODULATORS (RECONDITIONED)	£30.00
CPC 6128 MON/KEYBOARD DUSTCOVERS	£6.99
CPC 464 MON/KEYBOARD DUSTCOVERS	£6.99

IF YOU WOULD LIKE TO BE PUT ON OUR REGULAR MAILING LIST FOR SPECIAL OFFERS ETC. PLEASE WRITE AND ADVISE US STATING WHICH COMPUTER MODEL YOU HAVE.

We also stock spare parts, software etc, for Commodore 64 and Spectrum computers.

ALL ORDERS SENT BY RETURN:
CHEQUES/VISA/ACCESS/POs

TRADING POST, VICTORIA ROAD, SHIFNAL, SHROPSHIRE TF11 8AF
TEL/FAX (0952) 462135

Access VISA

THE AWARD WINNERS...

First disk drives for the CPC464/464+. Includes 3.5" disk drive, DDI-1 interface, connecting cables, power supply and utility software. The complete PLUG IN & GO solution. Full instructions and 12 months guarantee. Only £159.99. Please state 464 or 464+ when ordering.

Cherry Paint drawing program RRP £14.99 FREE with every first disk drive

Winner of the Best Disk Drive award, *Amstrad Action July '93*

3.5" Second disk drives for the CPC464/664/6128. Top quality 'Panasonic' 3.5" drive mechanism, includes power supply, connecting cable, full 16 page manual, RAMDOS, RAMdisk & many more utilities. Format 800K per disk just like a PC, Amiga, Atari ST etc. The complete PLUG & GO solution.

SUPERB LOW PRICE, *ONLY* £64.99!!

ROMDOS *XL*

Superb high capacity disk operating system available on ROM or complete in its own ROMBOX! Nothing else compares with these features:-

- Built in disk formatter
- Built in file copying/erasing
- Full 19 page printed manual
- Built in Sector/Directory Editor
- Very simple to use
- Uses no user memory
- Auto detects format
- 464/664/6128 compatible

ROM version *only* £24.99
Complete in ROMBOX *only* £39.99

Winner of the Best Disk Operating System award, *Amstrad Action July '93*

ALSO AVAILABLE...

3.5" Blank Disks — **Only £7.50 for 10**

HACKIT - excellent Award Winning hacker/machine code programming cartridge. **Only £24.99**

PC-TRANS - transfer files from a CPC to a PC and vice versa. **Only £24.99**

RS232 Serial Interface - can be used to connect the CPC to another computer, modem, serial printer etc. Ideal for use with Amstrad NC100/200 (connecting cable available priced £9.99). Includes built in ROM software. **NEW LOW PRICE £29.99**

Please add £5.00 postage and packing to all disk drive orders. Other orders please add £1.00. All major credit cards accepted. Immediate despatch for credit card orders.

Siren Software, Wilton House, Bury Road, Radcliffe, Manchester M26 9UR
Tel: 061 724 7572

Amscene

What's hot and not what's not on the CPC news front.

Strange domain

Dave Golder, editor (though he's known by neither of these term the office)

Public domain software has always been the cause of much confusion. In theory it's free because you can copy it legally; but the way most people buy it, through the post, usually entails some exchange of money. This is normally explained as costs top cover postage, packaging and copying expenses. But sometimes you do wonder whether someone is on the make and there is a lot of distrust about the PD scene.

Which is a shame because there is an awful lot of potential in the concept of public domain. Now that the major software companies have pulled out of the market, most of the new software being written for the CPC ends up in the public domain, which means that now, more than ever, there is some really good stuff to be found. The public domain also serves as a good training ground for new software writers who, might , if they get enough feedback, move onto producing homebrew software. This would be good for them – they'd be earning money – and good for the CPC scene in general, because we'd be getting good quality software. So the Public Domain could be seen as the one area of the CPC scene that could grow and prosper.

So, what should be done about PD? That's what we asked leading figures on the CPC scene in our feature (page 16), but let us know what you think. **Dave**

PC CPC, see?

We reviewed a speccy emulator for the CPC a while back, but now there's a CPC emulator for the PC. Does this ever stop? If you loaded your CPC emulator into your PC, and loaded your Speccy emulator into that, you could have all sorts of problems. Go out and buy a Speccy instead.

Seriously, though, this is rather wonderful. *CPC EMM*, the CPC emulator for the PC, has the facilities for ROMs, some CRTC registers, as well as some extra features to make CPCing a bit easier. We'll be reviewing it next issue, but if you're that impatient you can contact Marco Vieth, Auf dem Uekern 4, 33165 Lichtenau, Germany.

Will you be able to play our covertapes on a PC?

Thanks to Gavin Pugh for the information.

Another show...

Hot damn, etc, it's the Future Computing '94 show. If you enjoyed the FES2 last year, this new improved Future Show, with more workshops, more stuff to take part in and less of an emphasis on console games, should be even more up your street.

If you manage to come along to Earl's Court 2 on the 26th to the 30th of October you'll get a chance to see some of the very latest technological developments, experience the forefront of computing technology, attend the workshops, presentations, demonstrations, and plant your feet firmly in the next century. There'll be more details on prices and stuff when they've been worked out.

...And another fanzine

That's right – we've had another one writing in, CPC Mania, produced by Derek Payne. The issues cost £1.50 each from 89 Wolverhampton Road, Codsall, Wolverhampton, WV8 1PL.

Errata

In the back-up feature last month we printed a quotation credited to Rob Scott of Avatar. It should have read Phil Craven of Avatar. Rob has nothing to do with Avatar. Got that?

Adventuring on...

For anyone now wanting to get their hands on software from Adventure PD, you're looking in the wrong place. The entire Adventure PD software range is now available from Adam Shade's Dartsma PD instead, in exactly the same form as they were in from Adventure PD. For anyone who doesn't have the motor neurone skills to look across the spread at the Amscene Directory, the address for Dartsma is 49 Heavitree Road, Plumstead, London, SE18 7QX.

Quantum mechanics

Not exactly a news story, more of an announcement, really. A lot of people have been having incredible hassles with Quantum, to do with deliveries, reliability and replacements.

Those who're getting annoyed with the situation are perfectly justified in their actions, but a few are taking it out on the wrong person – Rob Scott and STS would like to make it clear to everyone that they left the technical repairs and hardware side of Quantum a while back, and have nothing to do with the problems people are having with their orders. STS will continue their sales of Quantum software, but that's about as far as it goes.

Another matter of convention

Word has reached the *AA* news desk (as if we have a separate desk – I ask you) of a third UAUG convention. "What happened to the second one?" That was the one I covered last year – we missed the first.

Anyway, the UAUG 3 will be held on June 19th at the 'Hamilton Room', Church Road, Betchworth, Surrey. When I get more information I'll let you know, but this looks like it could be easily as good as last year – a load of CPC fanatics swapping hints, tips, and lots of other interesting things. It'll also be a good opportunity to join up for all of the benefits of the UAUG.

So the top people in the UAUG (right), as well as some of the really big names in CPC land will be there, so why not have a think about it...

Nip along to the third UAUG convention later this year and meet these blokes. And loads of other people.

If you want to be included in the Directory, or you know of any information that needs to be updated, write to: Amscene Directory, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

Amscene Directory

PD Libraries

Amsof
✉ Lissanly, Cloyne, Middleton, Ireland
Large range of European stuff.

Braysoft
✉ 2 St Margaret's Road, Hayling Island, Hants, PO11 9BP.
3-inch disks only.

Colrob PD
✉ 9 Aviemore Road, Hemlington, Middlesborough
New tape-only PD library

Dartsma
☎ 081 855 7790
✉ 49 Heavitree Road, Plumstead, London SE18 7QX.
They have also taken over Debbie Howard's Adventure PD collection.

Demon
✉ 47 Hilton Avenue, Hall Green, Birmingham B28 0PE
3.5-inch discs available.

Disk PD
✉ Lower Dexbeer, Dexbeer, Holsworthy, Devon EX22 7LA.
☎ 0288 82348

GD PD
✉ 49 Woodville, Barnstaple, Devon EX31 2HL

Image PD
✉ Darren Dodds, 15 Elmwood Drive, Ponteland, Newcastle-Upon-Tyne NE20 9QQ
Also provides a digitising service.

PD Fun
✉ 41 Michaelgate, Kirkby Lonsdale, Via Carnforth, Lancs LA6 2BE
A policy of 'no serious software'.

Power PD
✉ 83 Longleat, Great Barr, Birmingham, West Midlands B43.

Presto PD
✉ 33 East Lane, Sandiway, Northwich, Cheshire CW8 2QQ

Signal Software
✉ 83 Longleat, Great Barr, Birmingham, West Midlands B43.

Sheepsoft
☎ 0446 736529
Based in Wales, of course. Baaaaa

Sleepwalker PD
✉ Disk software: Joe Moulding, 9 Meeting House Lane, Balsall Common, Nr Coventry CV7 7FX
Special offer to *AA* readers – if you send Joe a disk he'll send you a free selection of PD. Only one selection per person, please.

The Vault
✉ 43 Windfield Gardens, Clybaun Road, Galway, Ireland.
☎ 010 353 91 28204
A new but rapidly expanding library with lots of European software.

Ultimate PD
✉ 26 Woodside Road, Irby, Wirral, Merseyside L61 4UL
New PD library that specialises in 3-inch disk and tapes and has a wide selection of 'mathematics' programs available (whatever that means).

Fanzines

Amszine
✉ Gayton, Lanesside Road, New Mills, Via Stockport, SK12 4LU
☎ 0663 744863

The Eliminator
✉ 14 Station Road, Riccall, York, North Yorkshire YO4 6QJ

CPC User
☎ 0329 234291
The UAUG's fanzine.

CPC Undercover
✉ 37 Trimingham Drive, Brandlesholme, Bury, Lancashire
A technically-minded fanzine that's also on the look out for writers.

Ultra Games
✉ 20 Lancaster Terrace, Chester-Le-Street, Co Durham, DH3 3NW
Cassette-based multi-format fanzine from the man who used to produce *Am-Com*.

User Groups

Amstrad Contact
☎ 0403 753348
Sussex-based group that also runs a technical helpline for CPC users.

UAUG (United Amstrad User Group)
☎ 0329 234291
An *AA*-recommended user group.

WACCI
☎ 0602 725108
If you're seriously into the techy side of the CPC then you really shouldn't be missing out on WACCI. They're fab.

Independent Software Companies

Avatar
☎ 0274 602180
Suppliers of Phil Craven products, and a few of the Bonzo titles.

Campursoft
☎ 041 554 4735
You name it, they do it, really – take a look at the interview in ish 96.

DMP Software
✉ 89 Wolverhampton Road, Codsall, Wolverhapton WV8 1PL
Over 30 home-programmed games and serious programs on both tape and disk.

Gary & Scott Kennedy
☎ 061 736 1204
Authors of *Trakers*, a truly great CPC game (don't argue).

New Age Software
☎ 01049-711-4201920
Responsible for *Zap'T'Balls*, the excellent *Soundtrakker*, and, hopefully, a few more titles pretty soon.

Radical Software
☎ 081 856 8402
Still releasing top-quality, new software for the CPC. If you've written a program you think is worth releasing this lot would love to hear from you.

SD Microsystems
☎ 0760 720381
Specialists in business software – take a look at the feature in AA93.

Sentinel Software
☎ 081 876 7032
Suppliers of selected STS titles and a few original products. They don't arf churn 'em out.

Siren Software
☎ 061 724 7572
It'd take a hell of a time to list everything they do – check out their ad (it's the yellow half-page one).

VerySoft
✉ 450 Roughman Road, Wingfield Estate, Rotherham, South Yorkshire.
The people who brought you *The Gripper* and *Comparitor*. They're also on the look out for new programmers.

Big Softies

So you can ring them up and hassle 'em about releasing some new stuff.

Alternative Software
☎ 0977 797777

CodeMasters ☎ 0926 814132

Gremlin/GBH ☎ 0742 753423

Ocean/Hit Squad
☎ 061 832 6633

Titus/Fox Hits ☎ 071 700 2119

Touchdown ☎ 0268 541126

Virgin ☎ 081 960 2255

US Gold/Kixx ☎ 021 356 3388

Zeppelin Software
☎ 091 385 7755

Hardware

Datel ☎ 0782 744707
The place to go for mice, printers, memory expansions, all that sort of stuff.

Microform Fax: 0772 703131
Drives, upgrades, disks, all sorts of techy stuff like that.

Romantic Robot
☎ 081 200 8870
Creators of the Multiface.

WAVE ☎ 0229 829109
Suppliers of loadsa good stuff – their ad is on the back cover.

Software suppliers

OJ Software ☎ 0257 421915
Fast friendly service, the ad says. And it's right. They've got an impressively wide variety of software on offer as well.

Software Cavern ☎ 0628 891101
Probably the largest selection of CPC software for sale in the known universe.

Software Express
☎ 0463 240168
A new company in Inverness.

Tronics North
☎ 010 6177 253 766
✉ PO Box 7419, Garbutt, Queensland Australia, 4814.
The largest supplier of software and CPC bits'n'pieces in the southern hemisphere.

Mail Order

Trading Post ☎ 0952 462135
They're offering loads of cut-price cartridges at the moment.

Trojan ☎ 0554 777993
The people to speak to for cartridge and lightgun stuff.

Wizard Games ☎ 0723 376586
Games, games and yet more games, basically on every imaginable format.

Upgrades and repairs

Avatar
☎ 0274 602180

WTS Electronics
☎ 0582 491949
Amstrad-authorised repairs specialists.

Don't gamble with your AA105

There are some things you just do not joke about. Missing out on a copy of *Amstrad Action* is one of them. Think about it – you go down to your local newsagent and there are no copies left. No don't think about it. It's too hideous to contemplate.

So make sure this situation never occurs. It's simple. All you have to do is fill in this form over here to the right a bit and hand it to your local newsagent and then he'll order and save you a copy of Amstrad Action every month (there's nothing these newsagents like better than a guaranteed sale).

MAG*SAVE

Dear Newsagent,
Please save me a copy of...

AMSTRAD ACTION

...every month. It comes out every third Thursday of the month and is produced by those wonderful people at Future Publishing.

My name .....

My address .....

.....

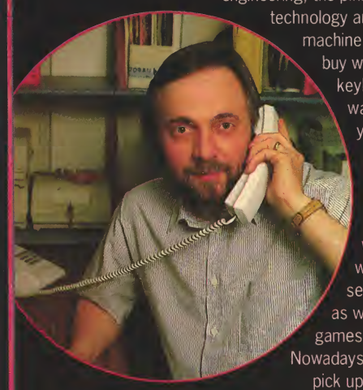
.....

DECADE 10 YEARS

1984 – the year Frankie Goes to Hollywood spent three months at number one, George Orwell's prophecy didn't come true and Amstrad launched a very long computer. *AA* longest-running editor, Rod Lawton, takes a personal look back at 10 years of the CPC.

April 11th **1984** – something happened that was to change the world forever. Allegedly. Alan Sugar launched the CPC464. It was a vision of the future. The world had never seen anything like it before (or Alan Sugar's barnet, either). It was a computer that came complete with – gasp – a proper monitor. And it had a built-in tape drive. And it was colour. And it had a huge 64K of memory. And it had holes for printers and joysticks and all sorts of other, as yet unimagined, goodies.

Okay, it was built like a plastic outhouse and had a keyboard from hell, but there was no doubting its technical ability and its wonderful all-in-oneness. It wasn't up against much, of course. The Commodore 64 looked like a keyboard pumped up to the wrong pressure, and the Spectrum had the ergonomics of a pre-war Skoda. By contrast, the 464 was a miracle of engineering, the pinnacle of technology and the one machine you could buy with a keyboard that was wider than your house.



Rod Lawton – he's seen some changes in his time. "It were all fields round 'ere..." Thank you Rod.

The thing about the CPC, though, was that it was a serious tool, as well as a games machine. Nowadays, you can pick up a PC for the price of a case of brown ale and a Chinese takeaway, but back then PCs were for corporate men in suits, whose departmental budgets were the size of the average person's mortgage. The ordinary punter couldn't afford both a house *and* a PC, so the arrival of the CPC was a breakthrough in home computing. It wasn't just a games machine. You could also program it using the built-in BASIC. And publishers started producing some quite good, serious software for the machine. You really could set up and run your own business using a CPC (you'd probably go broke, of course, but you could do it).

The next big thing

But the 464 wasn't perfect. Tape-based software might be cheap to manufacture, but it's not hugely reliable, and it's slower than a sedated stegosaurus to load. Amstrad responded in May 1995 with the CPC664 – a 464 with a disk drive and a keyboard that didn't look like it was made of Lego™. Still, only 64K of memory, though...

That memory limitation spelt the end of the 664 just six months later. In August 1985, Amstrad confirmed that it was deader than the dodo, and was to be replaced by a new machine – the 6128. This had – gasp – a disk drive and 128K of memory.

Autumn 1985 was an exciting time. You could buy *Protext* on tape, disk or ROM and *Technician Ted* scored 82 per cent in *Amstrad Action* (that was at a time when getting two pixels to move simultaneously in the same direction was considered an achievement).

Showbusiness

By **1985** you actually had whole shows devoted to Amstrads! The autumn 85 event took place at London's Novotel. Sadly, though, there weren't too many games softies there. And, er, Amstrad didn't have a stand there either. Guess they were showing their level of support for the machine right from the start, then?

Never mind – the CPC was getting loads of support from the games industry. In particular, one David Braben, author of the formidable *Elite*. Yes, the blockbusting *Elite* appeared that winter – the game many reckon to be the finest ever written. A game where you can spend months and years roaming through a universe populated by hostile wire-frame polygons and differently-coloured discs. *Elite* fans tell me it's a great game once you get into it. I tell them I'd have more luck getting into a phone box with Cyril Smith.

Antiques Roadshow

Tell you what, though. Why don't they write games like *Spindizzy* any more? More rooms than Buckingham Palace and harder than eating fried rice with chopsticks. Most people wouldn't live long enough to finish this game. If you bought this one in the spring of **1986** you're probably still playing it now.

Tell you something else that came out at the same time – *Mini Office 2*. This formidable suite of programs cost only £20, and included a word processor, a database, a spreadsheet, graphics capabilities, comms stuff, label printing facilities... and bugs. At least, the pre-pro version reviewed by *AA* did. But what a classic program. Look at how many CPC owners still use it. Quite.

In fact lots of things have gone the same way as *Mini Office 2*, haven't they? How many of you remember the *Grafsales Grafpad II* graphics tablet? Or what about the *Volex JTX2000A* teletext adaptor? And how about the old *Protek 1200* 'acoustic coupler'? These were the days when home computers were 'the future', when your micro could act as the nerve centre of your entire life. When you could turn your CPC into a teetering edifice, consisting entirely of loose cables, wobbly connectors and little black boxes that creaked if you squeezed them too hard.

Talking of creaky little black boxes, it was about this time (mid-1986) that Alan Sugar bought the littlest and creakiest of them all – the Spectrum. In fact, he bought out Sinclair. What an inspired move. Invent a computer better than your competitor's, then buy your competitor's. I never quite understood that one. This prompted lots of speculation that the CPC464 was for the chop. Yes, even back then, people were wondering how long the CPC had left to go. Happily, the machine lived on, and the rest is (pre)history.

The golden years

The mid-to-late 80s were the CPC's golden era. The software houses were falling over themselves to produce ever more innovative, challenging and daft software, while the peripherals manufacturers turned out RAM packs, speech synthesisers, graphics tablets, automatic plate-warmers and anorak interfaces by the billion. Users need never leave their bedrooms again, and many of them didn't.

Some of these plug-ins were a bit ambitious. Like the Vidi video digitiser, a device capable of taking a real-life image and turning it into 11 different-coloured pixels. Great for multimedia. Or do I mean migraine? And what about the (in)famous Red Box? For the uninitiated, this was a control system that plugged into your interface and could control, via other boxes, a host of mains-operated household items. What a load of old twaddle. No, really. For heaven's sake.

There were a lot of dodgy back-up devices, too. Things that could copy software from tape to disk. Things that could produce identical copies of disks. Things that let you fiddle with disk data on a sector-by-sector level. What did people want this stuff for? To blag games, of course, and other copy-protected software.

Carts weren't quite the success story Amstrad were hoping for.

Now there're going to be howls of protest about this. We're going to get loads of letters from people who found legitimate uses for these copiers. I don't believe a word of it. You were all a lot of scheming skinflints, out to squeeze as much of your mate's tape-based games onto one of your disks as possible. We know.

There *were* good games around, too. Like *Academy*, for example (a bit like a planet-bound *Elite*, but without the objects made out of coathangers), and the stupidly good *Sentinel*. And, of course, there was *Freescape*.

Now call me a stick-in-the-mud. Call me a moaning minnie. Call me a raving pilchard... (*oi, steady on – Dave*). But *Freescape*, to me, speaking personally, is, well, a bit dull. Well, flipping dull, actually. Duller than getting lost in a giant warehouse full of different-coloured boxes. And having to wear lead wellies at the same time. I'm sure many people got lots of pleasure from jerking slowly around a world full of polygons and dying suddenly after six hours. Not me.

The next big thing

Never mind, there were lots of other exciting things happening at the time. Rumours abounded about an imminent 16-bit Amstrad. Maybe an Amiga-compatible machine, or a new format altogether? Maybe indeed. And maybe pigs might fly. It turned out, of course, to be the doomed Sinclair PC200, a games-orientated PC with no more colours than a CPC in Mode 2. Pitiful. Needless to say it went down like a lead balloon. One that hadn't been blown up properly in the first place.

Doesn't it all seem a long time ago? There's something else that seems so long ago you're not sure it ever actually happened. And that's Amstrad supporting the CPC. Good grief, back in **1988** they still ran a CPC owners' club. It had an official magazine, a free technical support service, discounted software and a 24-hour ordering service. Or so it seemed. Amstrad were, in fact, in the process of hiving off their CPC club to outsiders, and this was just the start of a slippery slope into oblivion, ending with the final demise of *Amstrad Computer User* magazine in 1991. What a blow. 11 people returned disappointed from their newsagents that month (six of those because it was shut).

Never mind. If Amstrad were keen to unload the User Club, it didn't mean they were about to pack in the CPC. Indeed, at the same time as launching the ill-fated PC200 in 1989, they unveiled new CPC bundles. As well as your basic keyboard plus monitor set-up, you also got a TV tuner, 17 games of varying quality, a joystick, a 'workstation' (desk) and – rather bizarrely – a clock radio. Maybe Amstrad had experienced some bad luck in the clock radio market..?

They must have been doing okay elsewhere, though, because the company posted profits of over £90 million. But Alan Sugar was cautious about the future, given the (then) rise in DRAM prices. He should have been more worried about the (now) decrease in punters.

That was also clearly a problem for

CodeMaster – the people responsible for unleashing Dizzy – line up for the firing squad.

Database's *CPC Computing*, formerly called *Computing with the Amstrad*. Database gave it up as a bad job in the winter of 88. Most of its readers had given it up as a bad job long before then.

But big news was in the pipeline. No, not the CodeMasters CD games pack that we visited them to see and wrote a long article about, and which they never blooming-well made – the gits (*some things never change – Dave*). No, it was the launch of the fabulous new GX4000 console and Plus machines.

The 8-bit for the 90s

Amstrad were clearly very serious. They hired designers who made the new machines look as if they really did belong in the latter half of the 20th century, and they invited me and a posse of other, lesser, journalists over to a press launch in Paris.

No expense was spared. We stayed in a top-class hotel... we had dinner in the restaurant half-way up the Eiffel Tower... and two dozen brand new machines were set up and ready to run in the room next to the briefing ceremony.

It's a pity there weren't more games running on them, that's all. You could count the console releases on the fingers of one hand. If you only had one finger, that is. Amstrad's new machines would have stood a good chance if the software and marketing support had been there.

It didn't help that **1990** – the year the new machines were released – saw some fabulous CPC games released. Games which didn't need the console hardware, and cost half as much as console games. Remember these? – *Operation Thunderbolt, Ghostbusters 2, Hard Drivin', The Untouchables, Jack Nicklaus Golf, Chase HQ, Myth, Rainbow Islands, Castle Master, X-Out, E-Motion, Pipe Mania, Turrican, Italia '90, Bloodwych, Klax, Stunt Car Racer, Lords of Chaos, Rick Dangerous 2, Shadow of the Beast, Kick Off 2, Sim City*. All released in a single year, and all utterly excellent.

10 computers the CPC is better than (in some way)

1. **The Spectrum** Because it lasted longer.
2. **The ST** Because it hasn't got joystick ports so hidden in its bowels you can't plug them in.
3. **The PC** Because you don't need a degree in quantum physics just to switch it on.
4. **The Amiga** Because it's longer.
5. **The Apple Macintosh** Because you don't need 20 grand for the starter kit, and a qualified Apple consultant present every time you want to put a disc in the drive.
6. **The Archimedes** Because it's had more than five games written for it in the last 20 years.
7. **The C64** Because a disc game on a CPC loads in under 15 minutes.
8. **The MSX** What does MSX stand for, anyhow?
9. **The Electron** 'Cos games load occasionally.
10. **Jupiter Ace** Because the CPC isn't a crap ZX81 clone that got legally blown out of the market for copyright reasons. What kind of nonce builds a machine that runs FORTH, anyway?

CPC owners had never had it so good. The people who played games, anyway. The serious types weren't quite so thrilled. All the wonderful black boxes and fabulous widgets of the mid-80s were disappearing, and precious few manufacturers were coming up with anything new. The era of the CPC as a technological nerve-centre was at an end.

The beginning of the end?

The trouble was, it was beginning to look as if the CPC's era as the centre of anything was all but over. The serious wirehead techie types had pulled out of the market a while back, and now the major games publishers were doing the same. The CPC's relaunch had had almost no effect on the market whatsoever, and the GX4000 was shifting so badly there was talk of suppliers melting them down for the plastic.

What was going wrong? With the CPC, nothing really. It's just that by 1992 people had figured out that a £399 Amiga really was quite good value compared to a 6128 at £399 . And the Amstrad's processing power and graphics abilities, while ahead of the field in 1985, were now starting to look a bit prehistoric.

And in May **1992**, the biggest dinosaur of all, *Amstrad Computer User*, finally bit the dust. *Amstrad Action*'s oldest competitor was also its last... or was it? Born out of the ashes of *ACU* was *CPC Attack!*, hosted by Tank Girl-lookalike Amy and boasting a bright, new look. Alas it was a star quickly extinguished by the bucket of water called reality. It would have helped if a few more people had bought it. A couple of hundred, and they would have been laughing.

We were now entering a completely new era of CPC ownership; and the birth of the box-shifters. All those CPC peripherals made in their millions years ago were being dredged up from dusty warehouse corners and flogged off at bargain prices. Meanwhile, in the games world, publishers were knocking out last year's full-price games as budget releases! It was the CPC's Indian summer. You know autumn and winter are on their way, but for now you're just enjoying the late summer sun.

***Lost Caves* is a truly great game, and we're not just saying that because one of *AA*'s ex-writer's was the author.**

Rod's top 10 CPC games

1 *Laser Squad*
The best game that's ever been, or ever will be, written for any machine.

2 *Sentinel*
Eerie, terrifying, absorbing (bit of a gag there for *Sentinel* fans), and colossal.

3 *Klax*
Simple, yet brilliant. I still reckon I can beat anyone in the company.

4 *Lost Caves*
Ex-*AA* writer Adam Waring's forgotten classic. Made *Boulderdash* look pitiful.

5 *Lotus Esprit Turbo Challenge*
Great racing game. Everyone else thought it was too easy. Show-offs.

6 *Loopz*
I could have played this till the cows came home. If they could have got up the stairs to the office.

7 *Academy*
Chilling, tactical, testing and varied. Don't knock it until you've played it.

8 *Supercars*
Like *Super Sprint* with power-ups. Terrific.

9 *Power Tetris*
PD equivalent of the Game Boy two-player game. Stupidly addictive and good.

10 *Switchblade*
Why? Lots of nice detail and because I got further than anyone else.

The middle of the end

1993 was a bad year for the CPC. The market had been tottering all through 1992 and now it collapsed around a die-hard core of CPC owners. All the game freaks who had kept the machine going into the 90s suddenly went off and bought Super Nintendos and Mega Drives, and those that were left were only left because they didn't have two edge connectors to rub together – so you can imagine they weren't terribly active games buyers.

The software industry deserted the CPC. All except US Gold, who kept promising to release *Street Fighter 2* on the CPC. We all hoped they would, because the CPC needed a big new game. But then again, maybe we all hoped they wouldn't, because if it took all of the SNES's speed and power – and a six-button joypad – to run it properly, what would the CPC make of it? It was the sort of thing you'd wake up in the middle of the night in a cold sweat about.

But apart from the games fans, there were the serious users. They had stuck around since the beginning, convinced that the CPC was the only decent home computer ever made. Well, for its time it was. When the CPC was launched, people believed the key to the future was knowing how computers worked. 10 years on, that's proved not to be true. The machines have got ever more powerful, allowing ever friendlier software – which means that you now need to know far less about computers to use them than you did in 1984.

But what the CPC did help to create was a computer-literate generation which went on to program the software of the 90s.That's a legacy of which to be proud.

The end of the end

How much longer can the CPC go on? As long as people keep using it, is the simple answer to that little poser. The machine has already outlived its 8-bit competitors – the Spectrum is well and truly dead and gone and the C64 is a games-only machine which no-one is writing games for any more. The CPC still has lots of support. New serious products like the disc utility *ParaDOS* and the front-end system *DES* are among the best utilities ever produced for the CPC; and *Fluff* proves that there are still boundaries to be pushed back as far a games are concerned.

And here's one final fact to mull over. I used to write with *Protext* on the CPC. And right now I'm writing this feature with *Nisus* on the Macintosh. But it's not scrolling any faster, and the words don't read any better. The CPC may be a clonky old relic by today's standards, but it does the job.

That's the CPC all over.

The Amstrad Colour Personal Computer might be coming to the end of its life (and it's not giving up without a hell of a fight), but it's been quite a life. For 10 years it was the most powerful, versatile and genuinely useful 8-bit machine in existence. Can someone pass me the Kleenex™?

Rod's top 10 CPC hates

1 3.5 inch disk drives
If I hear one more supplier droning on about the superiority of their drive I'll scream.

2 AA17
For some reason, every other reader call we got here at *AA* was about an item in issue 17 that I knew nothing about.

3 The Red Box
People used to ask me where to get it and I didn't even know what it was.

4 Mode 0 graphics
Not so much graphics as a selection of different-coloured paving slabs.

5 Tape software
The sort that gets 99 per cent of the way through loading and then crashes.

6 ROM boxes
They either didn't work or had to be held together with Sellotape™.

7 Adam Peters' alarm clock
He didn't have one. Or if he did it went off at lunchtime. And then he ignored it.

8 Adventures
All of them. Without exception.

9 The 464 keyboard
Someone deliberately built it that way. I'd like to meet that man and shake him by the neck.

10 PD demos
If I listed all my mates at the end of this feature in red and yellow text on a pink background would you be impressed?

The Ultimate Games Experience is waiting to drop in on you!...

KJC Games is Europe's largest and most advanced computer moderated Play by Mail Games company.
When you join one of **KJC's** games, you enter a sophisticated and exciting' live' environment where you pitch your skills,and your wits against many other **REAL** live opponents from all over the UK and beyond.
KJC offers a wide choice of games to suit all tastes and interests....**Science Fiction, Sports, Adventure, Wargames, Street Crime & Fantasy Roleplaying** are all possible in the unique world of **KJC** games.
and....with KJC you get ...
New Games being developed all the time...
Colour Rule Books & Training Manuals...
Newsletters & Contact with other Players...
plus Friendly Club atmosphere.

Send now for the latest KJC Info and Free Tasters...
Just complete the coupon below...
You'll be glad you did!

*Name*_____
*Address*_____
_____
*Post Code*_____

KJC Games, Dept AA Freepost,Thornton Cleveleys, Lancashire,UK,FY5 3BR. Tel 0253 866345 Fax 0253 869960

RADICAL SOFTWARE

57 LEBRUN SQUARE, KIDBROOKE, LONDON SE3 9NS
TEL: 081 856 8402

SMART Plus (Any Plus)
£14.95 (disc) £13.95 (tape)
Simply the best art package for the Plus machines. Use the extra power of the Plus to the full in this easy to use package: - Features include 4096 palette, Oversean, Animation, Undo & Recall etc
"If you've got a Plus machine, then Smart Plus is for you" - WACCI review
"If you really want to see what your Plus can do, run out and get Smart Plus" - AA review

BALL BEARING (Any CPC)
£5.95 (disc) £3.95 (tape)
Control the ball bearing through 10 action packed levels avoiding the nasties and collecting the specials. Tons of gorgeous graphics, and challenging gameplay make this an essential budget buy.
"Fantastic graphics and gameplay are some of this games outstanding features - 89%" - Amstrad Contact Review

FLUFF (Any Plus)
£7.95 (disc) £5.95 (tape)
'Help Fluff' rescue her children who have lost themselves in the terrifying Fluffland. 12 Zones of hardcore scrolling action and stunning graphics go to make this the nearest thing to console action that has ever appeared on a Plus machine.
"I would willingly sell my own granny for just one copy of this game" - The Programmer

We also sell New Maxell & Ex Software 3"discs. Please phone or write for our latest prices or to join our mailing list. All prices include postage & packing.

ULTRA SOFTWARE (0295) 73 00 60

THIS MONTH WE ARE LAUNCHING A NEW CUSTOMER SERVICE
THE PRODUCT GUIDE HOTLINE!
CALL US ON THE ABOVE NUMBER AND WE'LL SEND YOU OUR LATEST PRODUCT GUIDE - WHICH CONTAINS DETAILS OF HOW TO GET THE BEST CPC PRODUCTS AT THE LOWEST PRICES.
SPECIAL OFFER - REQUEST YOUR GUIDE BEFORE THE END OF MAY 1994 AND YOU WILL RECEIVE VOUCHERS ALLOWING YOU TO SAVE UP TO £20 OFF THE PRODUCTS OF YOUR CHOICE!
FOR INFORMATION ON WHAT SOFTWARE AND SUPPLIES ARE AVAILABLE, SEE OUR ADVERT FURTHER ON IN THIS ISSUE!

STELLAR*OUTPOST

85% AA

Transported down into a seemingly deserted complex, your eight crew members, (each with their own special skills), have to locate and retrieve a Security Item and repair the five generators which power the complex. Without the power restored, your crew cannot transport back up, plus the fact that it is dark and you can't see the aliens which are attacking your people until you get close enough to see them with your suit lights.
With many objects to use including Light-Sabres, Medi-Kits, Energy Pills, Trackers and Teleport Rings, this strategy game will keep you glued to your computer for days. And with a different map generated every game you can be sure of a new challenge every time.

To order send a Cheque/PO for £4.99 Tape/£6.49 Disc made payable to A Swinbourne, to: CRYSTALX SOFTWARE, 11 VICARAGE VIEW, REDDITCH, WORCS B97 4RF. OVERSEAS ADD £1

PERIPHERALS

ROMBO ROMBOARD
Now only £25.00
The most widely used of all Romboards. 8 sockets each with an on/off switch; high 8 or low 8 ROM slots selectable; facility for a ZIF socket or 16k RAMROM.

DISCOUNTS
20% with the Dual-Mode Drive
10% with ROM software of £20 and over

VIDEO DIGITISER
Now only £65.00
(see also D.I.Y. Kits)
This is the ROMBO VIDI. It captures pictures from any video source such as a video recorder, camera or another computer and saves them to disc. The pictures can be manipulated in many ways. Pictures can be imported into standard packages like Stop Press, Advanced Art Studio, etc.
VIDI software on ROM - add £5

32k RAMROM - £14.95
(see also D.I.Y. Kits)
32k of RAM that thinks it's two ROMs. When loaded with ROM software, each 16k block behaves exactly like a ROM, even surviving resets, until the computer is turned off. Its primary purpose is to test ROM software during development, making the blowing and erasing of EPROMs unnecessary.

EPROM PROGRAMMER
with ZIF socket.....£35.00
with EJECT socket.....£30.00
Programs 8k and 16k EPROMs; 12.5v and 21v type; full or part EPROM or single bytes. ROM file editing. Supplied with easy to use menu driven disc software, PD games ROM file, ready to blow, and utilities to turn BASIC and machine code programs into ROM files.

ROMONOFF SWITCH £7.95
(see also D.I.Y. Kits)
Connects to the expansion port to turn all external ROMs on or off as needed. It is not suitable for a 464 with an external disc drive interface as the disc ROM would also be turned off.

3½" DUAL-MODE DRIVE

Winner of the Best Disk Drive award *Amstrad Action*

The above statement is untrue. Amstrad Action never presented such an award. Don't be deceived by any such statement wherever you might see it.

The No.1 3i" disc drive package around.
The price includes all of these:-
• MS800 on disc • MS800 on ROM • 22 Disk
• 10 blank discs • Power supply • Carriage

Our drives do *everything* that all other drives do - and a good deal more! Check it out.

MODE 1
Works as a complete alternative to the normal Amstrad 2nd drive (FDI), storing 180k on each side of the disc.

MODE 2
Full, unimpeded use with RODOS, RAMDOS, ROMDOS and ROMDOS XL, giving up to 800k per disc without the need to use the drive's clever side switch. Full 800k use of MS800 (see below).

OVERALL
Ultra quiet TEAC mechanism: can be used as a 14Mb drive on other computers; super small; separate power supply included; sleek, sturdy metal case. You need to buy nothing else to use your drive immediately. There is a 20% discount on the ROMBO ROMBOARD if it is purchased with the drive.

This drive is not suitable as a 161 1st drive.
Suitable as a 161 Plus 1st drive with an interface.
This drive is not suitable as a 464 1st drive.
Suitable as a 464 Plus 1st drive with an interface.
Please state your computer model when ordering.

£79.95 complete

MS800 - high capacity disc system
Simply the best and not without many good reasons. MS800 stores up to 400k on each side of a 3.5" disc - making a total of 800k. Each side has its own directory so discs full of small files can still fit their directories on the screen. MS800 makes stand alone discs.
MS800 is the *ONLY* system:
that does not need to be present for the discs to be used, that is compatible with all software including CPM, that uses *no* memory at all, that can use its discs in drive A (ABBA switch users) and that works with the Plus machines.
It is supplied with its own copying utility and a program that allows many uncooperative games to run from drive B. Check out all these features against the rest and you will see why MS800 is simply the best.
MS800 on disc or ROM.....£9.95

UTILITIES

BONZO SUPER MEDDLER 13.95
Superb tape to disc transfer utility. Deals with most forms of protections. Massive and increasing database of verified transfers, *STAND-ALONE* transfers.

BONZO BLITZ 13.95
Transfers all forms of SPEEDLOCK tapes onto disc, producing *STAND-ALONE* transfers. Large database of verified transfers. Includes 4 FREE adventures.

BONZO'S FLASHPACK 9.95
Over 60 powerful additions to BASIC for use within your own programs. Produces stand alone programs. i.e. Flash Basic does not need to be present for the programs to run.

BONZO'S BIG BATCH 9.95
Fast, flexible DATABASE, superb POOLS PREDICTOR, SCREEN and SPRITE DESIGNER.

MAXIDOS 13.95
The most comprehensive and effective of all CPC disc utilities. All functions work with AMSDOS, CPM, RAMDOS and ROMDOS formats.
Functions include:- disc/file copy, optimise discs speeding up accesses by up to 50%. CAT includes erased files, erase files, unerase files, disc editor, format, CAT file information, identity format, kill files, rename files, print CAT, set user numbers, make files Read Only, ReadWrite. System and non system, backup discs, verify discs, archive discs to tape and much more.

22DISK (Shareware) 5.00
The premier CPC to PC to CPC file transfer utility. Works with AMSDOS discs and one of the MS800 formats so your program's data discs can simply be taken straight to the PC for file transfers. 22DISK runs on the PC.

ROM SOFTWARE

PROTEXT	£30.00	UTOPIA	£25.00
PROSPELL	£25.00	MAXAM	£30.00
PROMERGE	£25.00	MAXAM 1.5	£25.00
PD GAMES	£3.50	VIDI ROM	£5.00
6128 ROM	£25.00	MS800	£9.95

RS-232 (dual-channel)
with comms software
by the designer of the PACE RS-232
£39.95

3rd DRIVE SWITCH 12.95
ABBA SWITCH 12.95
SIDE SWITCH (plug-on).....5.95
ABBA & SIDE combined.....14.95
3" individual disc cases .....10 for 5.95
3.5" discs.....10 for £7.50;.....30 for 20.00
3.5" locking disc box (40) 7.95
64k RAM PACK (DkTronics).....39.95

D.I.Y. KITS

All kits marked * require alterations to your computer's circuit board. If you are not comfortable with this, don't buy the kit.
Kits that are not stated as machine specific work on all machines.
All kits are supplied with diagrams and full instructions.

VIDEO DIGITISER.....46.00
This is the full ROMBO VIDI and includes everything you would receive if you bought it ready made.
32k RAMROM.....TBA
SIDE SWITCH.....3.00
(alteration to your disc drive's cable)
ABBA SWITCH*.....3.00
3rd DRIVE SWITCH.....7.50
Romonoff SWITCH.....4.50
464-6128 CONVERSION*.....45.00
This is the complete 6128 circuit board which includes the disc interface and the 128k RAM. The conversion is to replace the 464 circuit board with the 6128 one and the result is a 6128 in a 464 case. A disc drive is also needed.
6128 ROM*.....25.00
6128 Plus TAPE socket*.....18.00
(includes the REMOTE facility)
464 Plus DISC interface*.....30.00
464 Plus extra 64k RAM*.....15.00
We will fit the following kits for you if you send your computer to us:-
6128 ROM.....40.00
6128 Plus TAPE socket.....30.00
464 Plus DISC interface.....45.00
464 Plus extra 64k RAM.....25.00
All prices include carriage
SAE for fuller details of these kits

AVATAR 28 BELMONT AVENUE BRADFORD BD12 0PA **0274 602180** MAJOR CREDIT CARDS TAKEN

Access **(0257) 421915 O.J. SOFTWARE (0257) 421915** VISA
Fast Friendly Service

ADVENTURES

	Disk
Acheton	£12.95
Avon (with Murdoc)	£15.95
Countdown to Doom	£12.95
Giant Killer (Maths Adv)	£15.95
Kingdom of Hamil	£12.95
Last Days Doom/Hezarin	£15.95
Myth (Role Play)	£6.99
Philosopher's Quest	£12.95
Spysnatcher	£12.95

DISK COMPILATIONS

		Disk
CLASSIC 4 GAMES	Draughts, Chess, Backgammon, Bridge	£8.95
MINDSTRETCHERS	Monopoly, Scrabble, Cluedo	£12.95
SOCCER MANIA	FMngrll, FMngrWCup, Gazza, MProse Socc	£15.95
CASSETTE COMPILATIONS		**Cass**
DIZZY COLLECTION	Dizzy, Fast Food, Tr.Island, Magicland, F.World	£8.50
DIZZY EX. ADVENT	Dizzy Panic, KwikSnax, S/bound, Yolk Folk, Rapids	£8.50
SUPERSTAR SEYMOUR	Robocop, H/wood, WWest, Stuntman, Saves Pl.	£10.95
DREAM TEAM	Terminator II, Simpsons, WWF Wrestlemania	£6.99
HANNA BARBERA	Yogi Esc, Ruff & Ready, Top Cat, H.Kong Phooey	£4.99

EDUCATION

	Cass	Disk
Fun School I Under 5		£8.95
Fun School I 5-8		£8.95
Fun School I 8-12		£8.95
Fun School II Under 6	£3.99	
Fun School II 6-8	£3.99	
Fun School II 8+	£3.99	
Fun School III Under 5	£10.95	£13.95
Fun School III 5-7	£10.95	£13.95
Fun School III 7-11	£10.95	£13.95
Fun School IV Under 5	£10.95	£13.95
Fun School IV 5-7	£10.95	£13.95
Fun School IV 7-11	£10.95	£13.95
Playdays 3-8	£10.95	
Shoe People 4-6	£5.99	
Lets Play with Words 4-8	£12.95	£12.95
Fun with Words 7+	£8.50	£11.95
Read Right Away 1 5-8	£9.95	£12.95
Read Right Away 2 6-9	£9.95	£12.95
Read Right Away 3 7+	£9.95	£12.95
Better Spelling 9+	£8.95	£12.95
Lets Play Numbers 4-8	£12.95	£12.95
Lets Play Money 4-8	£12.95	£12.95
Primary Maths 3-12	£24.95	£24.95
Fun with Numbers 7-	£8.50	£11.95
Target Maths 6-13		£12.95
Micro Maths 11+	£24.95	£24.95
Better Maths 12-16	£8.95	£12.95
Mega Maths 15+	£24.95	£24.95
French Mistress 11+		£16.95
German Master 11+		£16.95
Spanish Tutor 11+		£16.95
Micro English 8-Ad	£24.95	£24.95
The Three Bears 5+ (6128)		£12.95
Five on Treasure Island	£9.50	£11.95
Granny's Garden 6-10 (6128)		£19.95
Dragon World 6-10 (6128)		£23.95
Giant Killer Maths Adv 9-14		£15.95
Answer Back Quiz 6-11		£11.95
ADDITIONAL QUESTION PACKS		
Arithmetic 6-11		£7.95
Spelling 6-11		£7.95

PRINTERS

All printers listed below are suitable for use with AMSTRAD CPC, ATARI ST, COMMODORE AMIGA, IBM PC & COMPATIBLES
When ordering please state computer

PANASONIC KXP1170 .....£144.95
STAR LC100 9 Pin Mono/Colour £169.95
(Inc. Colour/Mono Ribbon + Colourdump 3)
STAR LC24-100 24 Pin Mono £219.95
All prices include cable & delivery

PRINTER RIBBONS

Quantity:	1	2	5
DMP 2000/3000	£3.75	£7.00	£16.25
CITIZEN 120D	£3.95	£7.50	£16.25
KXP10/1180	£3.75	£7.00	£16.25
LC10/20/100	£3.75	£7.00	£16.25
LC24-10/20/200	£3.95	£7.50	£17.50
KXP1124	£3.75	£7.00	£16.25
LC10/100 Colour	£8.95	£17.50	
LC200 Mono	£4.95	£9.50	
LC200 Colour	£11.95	£22.95	

Other printer ribbons please phone
RIBBON RE-INK.....£12.95

BUDGET CASSETTES £3.75 EACH

Chuckie Egg	Colussus Chess
Continental Circus	Dizzy Kwik Snax
Dizzy Magicland	Double Dragon
Double Dragon II	Driller
F15 Strike Eagle	F16 Combat Pilot
Golden Axe	Gunship
Italy 1990	Matchpoint
Matchday	Myth
Outrun Europa	Quattro Cartoon
Quatro Fantastic	Rick Dangerous
Rick Dangerous II	Rodland
Scooby Doo	Seymour WWest
Soccer Double 2	Soccer Double 3
Steg the Slug	Streetfighter
Teenage Turtles	Test Master
Trivia Quiz	Turrican
Turrican II	WWF Wrestle

ARCADE

	Cass	Disk
Alien Storm + Sh Dancer		£12.95
Bonanza Bros		£4.99
Captain Planet		£12.95
Captain Blood		£6.99
Cisco heat	£3.75	£4.99
Dizzy Crystal Kingdom	£8.50	
Dbl Drag III + Rodland		£12.95
G - Loc		£9.99
Galactic Games		£6.99
Incredible Shrink Sphere		£6.99
Lemmings	£12.95	
Light Corridor		£6.99
Midnight Res + Nightbreed		£9.99
Mystical		£6.99
North & South		£13.95
Paperboy II		£12.95
Pop Up		£6.99
Prehistorik II	£9.50	£12.95
Rock n Roll		£6.99
Rodland + Dbl Drag III		£12.95
Spherical		£6.99
Strider II + UN Squadron		£6.99
Super Cauldron	£9.50	£12.95
Teenage Turtles	£3.75	£6.99
Titus the Fox		£12.95

SPECIAL OFFER DISKS

Bonanza Bros.....£4.99
Monty Python.....£2.99
Monopoly.....£2.99
Off Shore Warrior.....£2.99
Sporting Triangles.....£4.99
Wild Streets.....£2.99
Cisco Heat.....£4.99

STRATEGY/SIMULATION

	Cass	Disk
Cluedo		£6.99
Colossus 4.0 Bridge	£3.75	£7.95
Colossus 4.0 Chess	£3.75	£7.95
Football Manager II	£3.75	£6.99
Football Manager II + Exp Kit		£9.99
Football Manager III	£4.99	£12.95
Football Manager World Cup		£6.99
Monopoly	£2.99	£2.99
Sporting Triangles	£3.75	£4.99
World Class Rugby		£12.95
W.Cup Italia 90 (Not CPC+)	£6.99	

ACCESSORIES

AMX Mouse & Interface.....£34.95
AMX Mouse + Adv Art + Mouse Mat.....£54.95
Amstrad FD1 2nd Disk Drive.....£59.95
Cassette Alignment Kit (inc. Game).....£7.95
Cassette Lead (with REM Conn).....£3.95
Disk Drive Cleaner 3".....£5.95
Disks 3" Maxell 5: £12.50 10: £23.95
Kboard Ext Leads 464 £8.95, 6128 £9.95
Kboard Ext Leads 464+/6128+.....£9.95
Printer Cable CPC.....£8.95
Printer Cable CPC+.....£7.95
Joystick Splitter.....£2.99
64K Memory Expansion 464.....£44.95

BUSINESS/UTILITIES

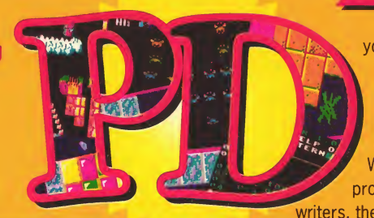
	Disk
Advanced Art Studio 6128	£19.95
Adv Art + AMX Mouse + M Mat	£54.95
Colour Dump 3 (Col Scr Dump)	£15.95
Crash Course Typing Tut 6128	£20.95
D.E.S. ROM Version	£24.99
D.E.S. Disc Version	£14.99
Discology (Disk Utility)	£12.95
Mastercalc 128 (128k)	£27.95
Masterfile III (128k)	£29.95
Microdesign + DTP for 6128	£29.99
Microdesign + AMX Mouse	£59.99
Money Manager (+PCW)	£24.95
Proprint (Print Enhancer)	£15.99
Protext.....CASS.....	£16.95 ... £21.95
Protext CPM (6128)	£51.95
Prospell	£20.95
Protype (Print Enhancer)	£23.95
Tasword 6128	£24.95
Tas-Spell (For Tasword)	£20.95
Xerox Disk Utilities	£14.99

JOYSTICKS

CHEETAH Bug.....£13.95
CHEETAH Mach 1.....£11.95
KONIX Speedking.....£11.95
KONIX Navigator.....£13.95
QUICKSHOT Python 1.....£10.95
QUICKSHOT Python 1 Microswitch.....£11.95
ZIPSTICK Super Pro.....£14.95
Games Paddle.....£8.95

How to order:- access/visa tel or fax (0257) 421915 mon-fri 8.30 -17.30 sat 8.30 - 12.30
By Post:- List items required. Make cheques/po's payable to O.J.Software. send to O.J.Software, 273 Mossy Lea Road, Wrightington, nr Wigan, Lancs wn6 9rn
postage:- united kingdom, orders over £5.00 post free (orders under £5.00 add 50p). *postage:-* overseas (Air) add £1.00 per item software (payment bank draft/credit card)
Please write or phone for latest price list (Answerphone/fax outside normal hours)

Public inquiry



Ask any PD librarian about why they're doing what they're doing, and they'll go off into flights of fantasy about PD keeping the CPC alive. Sceptical to the last, Simon Forrester challenges them to prove their case...

These PD people really do think they're God's gift, don't they? It's quite surprising that although they all seem to have the common goal in mind of continuing to support the CPC with cheap new games, utilities and applications, they never quite seem to manage to get along as one scene.

The philosophy behind PD is great – freely distributable software with no copyright restrictions to speak of that anyone can copy and pass on to other people without fear of a visit from the anti-piracy brigade. If the programs are good, and a lot of them are, then surely this can only be a good thing for the scene? In theory, yes.

But there is a darker, less constructive side to the CPC PD scene, and quite a lot needs to change before it can truly be of some help to a machine that desperately needs at the moment.

> *"I'd prefer to see the British scene running the same way as the European scene. Their method is much more productive."* Keith Woods

There's a side to the scene that maybe you aren't aware of, such as the xenophobia between libraries across Europe, the bias in many writers on the subject, the profiteering of some librarians who're determined to squeeze as much as they can out of the market instead of truly supporting it, the freeloaders who're running libraries stocked with everyone else's software whilst contributing nothing, and the perhaps double standards of the commercial crossover we see so much of these days.

So what's wrong with the PD scene?

Let's get down to the heart of the issue here – there is a hell of a lot wrong with the PD scene at the moment. These problems haven't been caused by any one person with a particularly bad attitude, they're problems that have been slowly boiling over for quite a while now:

• Xenophobia

Quite a surprising little idea, isn't it? There have been several instances of certain European fanzines attempting to 'boycott' the British scene, restricting membership on the grounds of race, and stuffing their pages full of racist jokes, and the like (the same happens in Britain, by the way). It was definitely a subject that most of the people we talked to had opinions on.

Firstly, Rob Buckley: "There's definitely a problem in that the continentals tend to look down on the British side, when the British side is obviously the strongest market. They also tend to get very upset if you say anything about them. As you have probably found out, you can't review things fairly. There is certainly a distinct difference between everybody else and this country.

Whereas they tend to be professional hackers and writers, the British users are just normal people." So this could be a problem of attitude, the British being too laid-back (I somehow find that a little hard to believe).

Some, like Matt Gullam, still see this scene as worthy (and why not?): "It is a bit sad. There's bound to be some sort of, 'we're British, we're best' attitude', but we try very hard on the British scene, and the rewards of our efforts are there for all to see." So maybe we're not all bad – we just do things our own way.

What inter-continental battle would be complete without Keith Woods? "I wouldn't call it racism. Racism is definitely far too strong. The British have a different way of doing things to everywhere else in Europe and, as far as I can see, that just naturally bought them into conflict with everyone else in Europe. The Europeans don't like the idea of PD libraries. Personally, I don't like libraries either, and I'd prefer to see the British scene running the same way as the European scene. Their method is much more productive, and creates more software. Everybody swaps with each other. That sort of thing never happens in Britain – there's no real contact between people."

So does this come down to a difference in the way the different scenes operate? Matt Gullam certainly thinks so, and a different distribution system

Meet the panel of experts

It's time to introduce our panel, the people we'll be talking to throughout this feature. Though we couldn't speak to everyone involved, we feel we've got a fairly balanced representation of the various people on the scene for this one, as every side of the argument has been represented in some way:

- ROB BUCKLEY – Now here's a name that you'll have heard with amazing regularity of late, because of his exploits into the commercial gaming market with *Fluff*, a game originally billed as having the best CPC gameplay ever, later billed (by *AA*) as having the potential for some of the best gameplay ever, and receiving a full review this issue. Whatever happens to *Fluff*, though, we can rest safe in the knowledge that he's already got a couple of decent text adventure titles under his belt.
- RICHARD FAIRHURST – What can I say? He's been writing for *AA* for what seems like an eternity now, and he doesn't seem to be getting tired yet, despite running a PD library, writing both commercial and PD software (have you seen *Powerpage 128* yet?), and generally being at university in Cambridge (he does a reet dossy course, though).
- MATT GULLAM – Having recently closed Presto PD, his long-standing and extremely successful (though always very laid-back) PD library, he's recently teamed up with Dan Heatley (oh no) of Quantum to set up PDQ, a new library that looks set to carry on where Presto finished. This means that there'll be megabytes of amazing software that'll be almost totally unavailable because of postal delays, cashed cheques, and volcanos engulfing Wales. What a team.
- DAVE MUGGERIDGE – The founder member of *Amstrad Contact*, a fanzine and user group for anyone wanting to keep up with the Bonzo Scrapyard updates (ex-Nemesis), isn't exactly an active PD person at the moment, but he did have a few things to say, and might just be making his grand entrance to the world of the CPC very shortly.
- ADAM SHADE – He's been a member of pretty much every British coding or commercial group over the past five years, and is now running his own PD library (as he's been doing for quite a while), Dartsma PD. As a sideline, he also runs a service for making custom leads, and claims to be able to make a piece of wire up to almost any specifications at all. On starting the interview, Adam asked, "Do you want the truth, or what the people want to hear?" Needless to say, we opted for the truth.
- KEITH WOODS – Having written for *AA* in recent months, Keith has probably burnt his name into your mind already. With a bin-bag full of PD software, a fanzine that, if nothing else, evokes reactions of all kinds, and a very strong connection with the European scene, Keith has been steadily campaigning for the European invasion of Britain for as long as the CPC can remember.

would explain why so little software makes it in a different country. Keith did suggest that maybe the lack of communication and co-operation on the British scene might be causing a problem.

Richard Fairhurst sees the problem as basically judgmental: "People tend to see what one or two people do in a given country as indicative of everyone else in that country. It isn't really fair to judge Germany on the actions of [name scrubbed for humane reasons]"

Adam Shade, put it slightly differently: "Basically I think the Germans and the French think they're better than everybody else, the English, French and Germans think they're better than the Irish, and then the Irish think they're better than everybody else. I don't think it's a problem because at the end of the day everyone will realise who can do what and no matter who thinks who can do what everyone knows who can do what and will let them get on with it." You can't write stuff like this...

Rob Buckley has gone commercial.

● Cliques

But the animosity doesn't just exist on an international level. Even with Britain there are certain groups within the PD scene that just can't get along.

"There should be some sort of system where you have to be some sort of registered library and to qualify for that you've got to reach certain standards." Adam Shade

First up, we'd better talk to Adam Shade, since he's been a member of pretty much every single British group at some point or another: "It's a problem but it's not a problem. Because one person's not talking to the other, there's someone in the middle who's talking to both of them and stuff still gets passed around."

Rob Buckley seemed cynical (what's new?): "Some of it I can understand – there are a lot of arguments going around and a lot of it you can understand but people just tend to argue for the sake of arguing. I've talked to people who've said, 'next time I see so-and-so I'm gonna do him', and the whole scene doesn't need this and it's driving people out, which is sad. I try to be nice to everybody, but some people really do get on my nerves." So there are definitely some people out there with a dodgy attitude to this whole co-operation thing.

Keith Woods sees cliques as ultimately self-defeating: "I don't think it's a big problem – those people have pretty much had their day at this stage. Most of them have completely lost contact with everything. The way I'm working Public Image is sending all the software to everyone so I can say in Public Image that you can get hold of the stuff from most libraries." So he's side-stepping the cliques that do manage to survive.

Our techy guru Richard had an interesting point: "It mostly comes about because there are only so many people active in programming the CPC these days. There aren't enough active members." So the problem may be down to a simple lack of numbers...

It's at this point in subjective time that Dave Muggeridge summed up the big problem with what's going on: "It's a big problem. If *Amstrad Action* ever went to the wall (*God forbid – Ed*), the big problem is that all that will be left are all these little fanzines. What needs to happen is that should all get together to form one focal point for the scene otherwise all the advertisers will go and they'll stop producing stuff for the CPC – it's that simple. If we don't do this then everyone will split up and go their own separate ways in their own little groups."

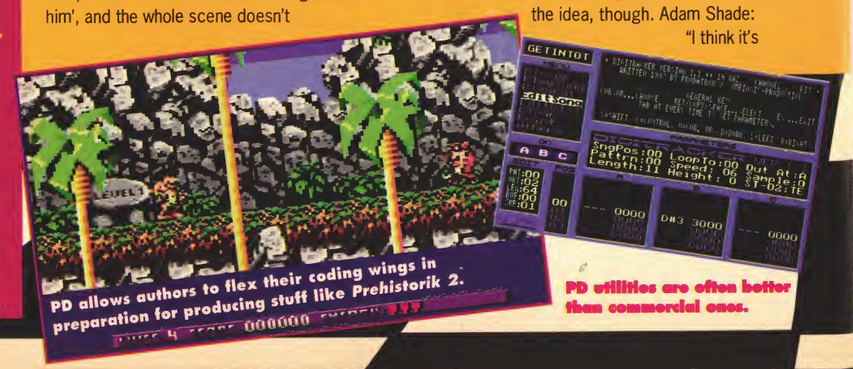
So it's pretty much agreed then – unless everyone pulls together on this, we're not going to have a computer left to write PD for.

● Almost PD

It's a symptom of the general lack of togetherness in the PD scene according to some, but perfectly justifiable to others. What happens is something like this: when a programmer finishes a piece of software, they'll submit it to PD, but only allow some libraries to stock it. The idea was originally bought to the CPC by Richard Fairhurst, to stop certain libraries stocking his software.

Rob Buckley: "I personally think it's a way of cutting out different people, which might not be a bad idea. I'm against kids starting things up then disappearing during the exams."

Not everybody is so happy with the idea, though. Adam Shade: "I think it's pathetic. You have to draw the line and stop there when it comes to PD."



PD allows authors to flex their coding wings in preparation for producing stuff like *Prehistorik 2*.

PD utilities are often better than commercial ones.

Who says nobody's writing games for the CPC anymore? PD programmers certainly are.

MatMatt Gullam: "It's very good idea indeed because it keeps out the little guys – the squeakies, as I call them. I'm sure Richard Fairhurst would be most annoyed if squeakies were making money on his work when Richard didn't want them to, and wasn't making any himself. But in the end it's up to the programmer."

"If I was to say that PD does not make money, I would be lying to you." Matt Gullam

And Richard Fairhurst, unsurprisingly, fully defends the system; "It's very much standard on a lot of computers. If you look at a lot of PD software on other machines, such as the Amiga and the PC, you often need to contact the author of a program if you want to use it in a different PD collection." (*This system is known as Licenceware – Ed.*)

So Almost PD might not necessarily be a bad thing? But what about those 'squeakies' that Matt mentioned?

● Sq... Small-timers

By small-timers, I'm referring to the uncommitted librarians that both Rob Buckley and Matt Gullam speak of, who make money from their activities, stocking their libraries from other people's collections, and giving absolutely nothing back to the scene. Are they causing real damage?

We'll start with the only positive comment on small-timers from Richard Fairhurst: "There are so many going under, you don't see many about these days. It's a shame really, because it's always nice to see new people." Aah – isn't that nice?

Matt Gullam: "They should definitely be discouraged. They're wasting their own time, and their customers' time. Customers would be far better off going to a more established library where the service is better, the range of software is better and everything's cheaper as well."

Dave Muggeridge: "There are a lot of them at the moment that're jumping on the PD bandwagon by nicking everybody else's programs – they haven't got permission of the authors to send them out at all."

Adam Shade: "There should be some sort of

Many user groups and fanzines have connections with Public Domain libraries.

But it's all such good stuff!

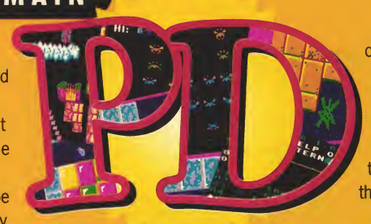
Okay, so the PD scene produces an awful lot of dross (now don't argue) but when it does churn out something half decent, you can bet it'll reach a quality rarely seen in larger commercial releases. So what are the differences between a professional programmer at US Gold and a teenager in their bedroom? These differences, after all, are what have pushed the CPC firmly into the PD scene.

- IT'S A HOBBY, NOT A JOB. There's a great deal of difference between someone finding they've got a couple of hours free in the evening and settling down to add some more to their very own game, and a fully-paid programmer knocking out a CPC version of a game because that's his job, clocking off at six and forgetting about the whole thing until the next morning. You can be pretty sure that someone who's writing a game because they really want to do it is going to come up with something a thousand times more detailed and original than their commercial counterpart (well, in theory, anyway)
- CONVERSION TIES. If a commercial programmer is doing a CPC version of, for example, *Street Fighter 2*, they're restricted to producing a clone of the original on a less powerful machine. This means that animation, sounds and speed are all compromised to get the job done. The only problem is that if you take away the sounds, animation and speed, you've pretty much destroyed most console games anyway. The real problem comes when the programmer tries to make up for this by adding extra gameplay elements to the whole thing, but is restricted by the contents of the original game that he is, after all, converting. A program originally written for the CPC, then, is obviously going to make better use of the CPC's capabilities.
- NO MACHINE LOYALTY. This may sound a bit drastic, but it's not as Victorian as all that – commercial programmers lose out because whereas they've got a working knowledge of the CPC as well as the C64, Amiga, ST, PC and probably a console or two, a dedicated CPC nut will have a complete knowledge of the CPC, outside and in. To put it another way, could *Zap'T'Balls* have been written as well as it was if Elmar Kriegar hadn't already spent several years learning every little glitch, trick, or undocumented area of the machine he was working on?
- INDUSTRIAL SCHEDULES. If you've been involved with the PD scene at any time (even as a customer), you'll definitely have noticed the release dates of games sliding back to allow the programmer to put in some extra work on their masterpiece. In a commercial software schedule, this kind of elastic timing isn't really possible, as programmers are tied to duplication dates and, most of all, release dates. With an industry that only has a few major release periods of the year (Christmas being the main one), a set-back could mean missing a sales drive altogether, and probably forfeiting most of the profits because of it.

Chances of survival?

Somehow, the people on this scene manage to co-operate enough to produce quite a lot of different types of software. Exactly what potential does all this stuff have towards the survival of the CPC, though?

- DEMOS – I don't think it's worth keeping secret the fact that I personally think demos are a pointless waste of time, and a load of tedious, repetitive, egotistical wibble, as I'm sure you've managed to work out my views before now. Let's face it – no-one's going to keep hold of a machine because they like loading up thousands of identical programs with the same wibbly wobbly text, copied music and coloured bars running through the background, are they?
- UTILITIES AND APPLICATIONS – Now this is a bit more like it. The amount of serious software available through PD for your machine is truly staggering – if you don't like the way your file copier works, you can lay your hands on another 20 that might suit your needs a little better. The serious software available far outnumbers the games, and is probably what draws programmers to PD in the first place.
- GAMES – The quality of PD games varies dramatically, with some programmers releasing their software on PD because they know damned well that no-one would ever pay real money for it in a million years. Don't let this mislead you, though, as there are some really good titles out there (*Croco Magneto*, for instance, which was good enough to inspire the commercial release of *Ball Bearing*). You'll just have to look really hard, that's all (or read Public Image every month).



system where you have to be some sort of registered library and to qualify for that you've got to reach certain standards. If you get too many bad words you should be cut off until you can build your name back up again. This way, Joe Bloggs can't say, 'I'm a new library, give me your money,' and stop established libraries getting it. If someone's starting up, good luck to them, but there are too many people starting up then not being bothered, not returning discs, etc."

So they all agree that there is a problem. It's just whether anything should be done about it – Rob Buckley: "It is a bit annoying that you do produce a bit of software and other people make the money out of it, but you have to accept that."

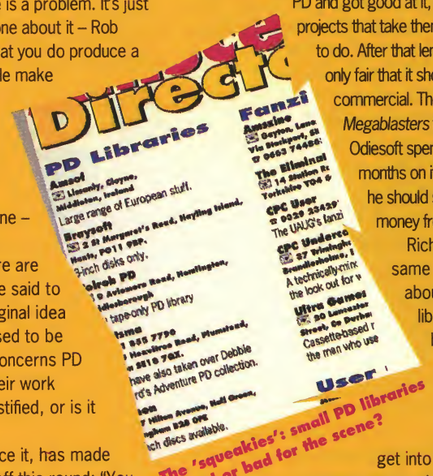
Making money, eh?

● Commerciality

There are two sides to this one – first, there's the issue of PD libraries making money. There are quite a lot of libraries that are said to be overcharging, and the original idea of PD was that it was supposed to be free. The other side to this concerns PD coders who decide to sell their work commercially. Can this be justified, or is it betraying the PD scene?

Rob Buckley who, let's face it, has made just such a transition, kicks off this round: "You don't see any profit. I've done it because nobody else is. If you know of anybody who does make any money from the CPC scene, I'd like to talk to them."

Try Matt Gullam; "If I was to say that PD does not make money, I would be lying to you. PD does make money, but if you're a part-timer the amount of money that you make in relation to the amount of time you put into it if you're running it properly, collecting software, giving a good service is very, very small indeed. If you were doing it as a full-time job you'd be a very rich man. I agree that everybody should have the best of everything and it should be free but if I'd written a program and it was very good, by donating it to PD it's the librarians making the money not the programmer, so I can see their point.



The 'squeakies': small PD libraries - good or bad for the scene?

Everybody's got to start somewhere, and they're starting on the PD scene."

Keith Woods: "I don't see it as a problem – I see it as a good thing. PD is helping the CPC market by producing commercial stuff. You look to *Soundtrakker* and that sort of thing. They're the results of people who've started coding for PD and got good at it, doing major projects that take them a few months to do. After that length of time, it's only fair that it should go commercial. There's *Megablasters* from Germany – Odiesoft spents months and months on it, so it's only fair he should see some money from it."

Richard feels the same way as most about profitable libraries, and backs up commercial sales to the hilt: "If you wanted to get into making money, you could find other ways, such as selling your stuff commercially. It's nice to do both, really. For example, *Powerpage 128* couldn't go into PD totally because of all the work I've put into it recently – it wouldn't be fair on me."

Adam Shade: "No libraries should charge more than 50p per side. I don't think libraries should make much money, which is why I set up a computer supplies business to fund the library. As for people going commercial it's a shame because less good-quality PD comes along, but it's good because it's still supporting the CPC, it's opened up more software houses which means more software can be written because there's more encouragement to write it. The titles they produce aren't expensive as the companies themselves have lower costs and as long as they keep the prices down, it's not too bad."

So for the CPC, commercially releasing software is a good thing – what's it doing to the PD scene, though? If you look around the ads for PD libraries, you'll find quite a few of them charging a hell of a lot more than 50p per side (disc not included) – is this right?

What to do?

We can sit here and speculate about all the things that are wrong with the scene, but unless we sit down and take some decisive action on this, the PD scene is never going to be strong enough to support the CPC.

Keith Woods has started up a scheme whereby he distributes every piece of software he reviews in *AA* to the major libraries in Britain. As far as we know, this is the only vaguely hopeful scheme underway. In classic British style, there is someone disagreement over the scheme.

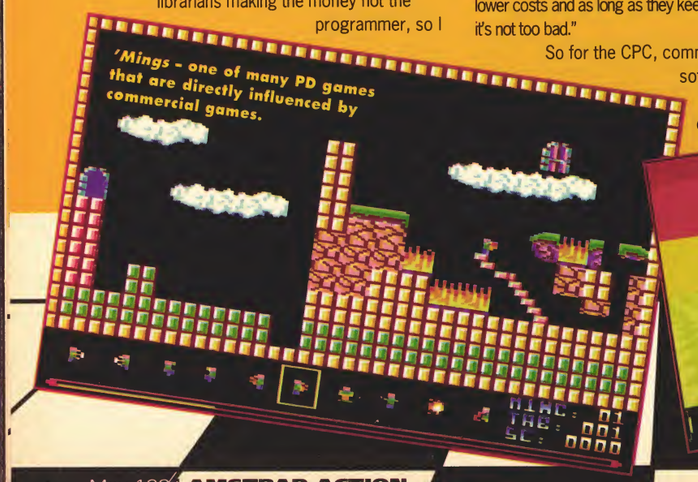
Matt Gullam: "I don't agree with Keith's idea. A lot of people have PD libraries that they like and they stick to. People can come across them by accident or recommendation or whatever, but they like what the library stands for. If Keith starts sending this stuff out, people would start writing letters saying 'can I have all the programs reviewed in the last *AA*,' or whatever, and they wouldn't experience the wider range of software available."

Adam Shade has a slightly different system for sending out PD: "There are too many nobodies with the same stuff, ordering from every library to stock theirs. The biggest problem is that you order one program, and everything else on the disc is rubbish. The way my system operates is with people picking and mixing their own programs."

Rob Buckley: "We need to get a lot more commercial software on to the scene, such as the stuff that's on the covertapes – people need to persuade these companies to release the stuff that isn't available commercially anymore on to the PD scene. Nothing is commercially viable."

Probably the most distressing aspect of this feature is that no-one has any real idea or action plan as to how to knock the PD scene into shape. Once the right people start realising that their actions, methods and morals are damaging the scene they'll find it much easier to actively help the machine they're using. We all want to see the CPC live for a long time yet, and as things stand right now that's just not going to happen.

If anybody out there reading this has any real ideas as to what we can actually do about all of this, we'd be more than happy to hear from you, just as we'd be prepared to spend as much time on this as is possible to actually try and get something done. We're waiting.



Zap'T'Balls used the PD scene by using a cut down PD version to advertise the full price game.

multiface. THE FINAL CLEARANCE!

When the **MULTIFACE** was launched in 1986, it was an outright winner. No one has ever come up with such a powerful, useful add-on. Labeled *the* ***ESSENTIAL CPC COMPANION***, this **MULTI**purpose inter**FACE** proved to be an absolute Godsend for the Amstrad CPC users. Remember the first disk drive on the CPC 464? Suddenly the loading took seconds rather than minutes from tapes. Except that there was not much to load - very little had originally been released on disks and there was no facility to transfer programs from tapes to disks.

THE SAVIOUR

This is one area where the **MULTIFACE** saved everything - literally. The black magic box could stop anything any time and **SAVE** it to disk or tape. When the 6128 came with a built-in drive, it was left again to the **MULTIFACE** to do all the transferring - and to perform other miracles... So, in case you just came from Mars, what does a **MULTIFACE** do? First, it sits at the back of your CPC, its magic button always ready. Press it, and the **MULTIFACE** takes control!

ACTION!

Once in action, it freezes everything and it displays its own menu. Being fully menu-driven and error-trapped, you'll probably never need the full manual that comes with the MULTIFACE. Most operations are also entirely **AUTOMATIC**, so to *SAVE* a game once you stopped it, you just *name* it, insert *disk/tape*, and press a key. You can then *return* and *continue* the program. If you get beaten later on, just reload from where you saved last and play just from there again! No need to go back to the start all the time. Or even better, the **Multiface** allows you to **POKE**

INFINITE LIVES

listed in this magazine and you'll *never* loose. The MULTIFACE comes with a built-in **TOOLKIT** that lets you inspect/alter/dump the CPC RAM. It also has its own 8K RAM and 8K ROM. Many top programs were written with the aid of the TOOLKIT and the extra 8K RAM. And do you like the **screen shots** in this magazine? They are all produced using the **MULTIFACE!**

When we announced earlier that we were to pull out of the 8-bit market, the surge of interest in the **MULTIFACE** was such, that we had to make many more. And not just the MULTIFACE - we also have the one and only disassembler,

THE INSIDER

that lets you ***see*** and ***alter*** what happens any time anywhere inside a ***RUNNING*** CPC program. It comes on a **disk** and loads inside a MULTIFACE. Press the magic button and the **INSIDER** will di-sassemble, find text/code, dump the CPC RAM to printer, etc. Get it at **HALF-PRICE** for **£7.95**!

LAST CHANCE!

As this goes to press, we still have enough stock of both the **MULTIFACE** and **INSIDER**. This, however, is our ***final clearance*** and once these are sold, we will NOT make any more. The **MULTIFACE** is terrific value, in fact more for the *customer* than for the *manufacturer*... We will only accept orders when we can supply the goods and we give a *full guarantee*. Plus we still offer up to **£10 OFF! mail orders!**

You MUST NOT use our products to copy, reproduce or infringe in any way whatsoever any copyright material without the permission of the copyright owner. We do neither condone nor authorise the use of our products for the reproduction of copyright material - to do so is ILLEGAL!

All prices are already discounted and apply to Mail Orders to 31.5.1994 only.

I order a **MULTIFACE 2** for **CPC 464/6128** ☐ ~~£47.95~~ **£39.95** or for **CPC+** ☐ ~~£49.95~~ **£39.95**
RODOS ☐ ~~£29.95~~ **£14.95** **BLANK DISKS** ☐ ~~£3.95~~ **£2.95** **INSIDER** ☐ ~~£14.95~~ **£7.95** **PLUS P&P:** UK and Europe **£2** Overseas **£3**.

I enclose a **cheque/PO/cash** for **£**..... or debit my **Access/Visa** No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ Card Exp.....

Name/address.....

ROMANTIC ROBOT, 54 Deanscroft Ave, London NW9 8EN ☎ 24 hrs VISA 081-200 8870 ☎ AA

COMPUTER REPAIRS

★ AMSTRAD AUTHORISED ★

Quality Assured!

- ★ Fixed price repairs on many machines
- ★ Over 2500 square foot engineering complex
- ★ Top quality technicians at your disposal
- ★ All work warranted
- ★ Fast turnaround
- ★ Simply post or hand deliver your machine and we will do the rest
- ★ Collection Service available

Please supply evening and daytime telephone numbers

Amstrad 464	£29.00	
Amstrad 6128	£33.00	(extra £25 if disk drive needs complete replacement)
All monitors	£15.00	Diagnostic charge plus quote
Others	P.O.A.	

(WTS Electronics Ltd reserve the right to refuse machines that in their opinion are beyond reasonable repair. Full charge applies.)

Tel: 0582 491949 (4 lines)
WTS Electronics Ltd, Chaul End Lane, Luton, Beds LU4 8EZ AA

AMSTRAD REPAIRS

- ✷ Quality repairs at unbeatable prices
- ✷ Standard charges on most repairs
- ✷ =FAST= Turnaround
- ✷ Free technical support /advice/information on all repairs carried out
- ✷ All repairs guaranteed

AMSTRAD 464	£24.00 *
AMSTRAD 6128 (exc. disc drive replacement)	£28.00 *
MONITORS	P.O.A
PCW's	P.O.A
P.C's	P.O.A

*(Postal repairs - please add £3.50)

Established repairers to the Trade/Education
Amstrad - Amiga - Acorn - Commodore - PC's etc
H.E.C. (Est'd 1986)
(Hindley Electronics ComputerCare)
47-49 Railway Road, Leigh, Lancs. WN7 4AA. Tel: (0942) 261866/672424

Basically Basic

When we asked Simon Forrester to take over the reigns on our beginners' guide to BASIC he went a bit loopy...

Right, you've got me doing this column now, so like it or lump it. But everyone who's quaking because they've read my Assembly Line series and made about as much sense of it as the final episode of *The Prisoner* need have no fears. I'll be gentle. Honest. And anyway, the sooner I get you conversant in this BASIC stuff, the sooner you can get reading my equally superb machine code programming series. Okay?

By the end of this spread, we're going to have written a program that displays times tables on the screen and introduces you to the concept of FOR/NEXT loops. Before we do that though, let's have a quick recap of the command we want to use, being PRINT:

```
PRINT 4
```

If you've been reading the previous installments of this series, you'll already know that this command will PRINT the number 4 on the screen. You can type it in now, pressing RETURN or ENTER to make the command work. If we wanted to display something other than a number, the command would be slightly different:

```
PRINT "Wibble"
```

As you'll see if you type in this command, the speech marks aren't displayed when the command is executed – they're there to tell the CPC that what has to be printed is text (words) and not maths.

Was that maths?

Sure, you could have used PRINT "4", but let's compare the results of the following commands:

```
PRINT "4+3"
PRINT 4+3
```

If you typed in both of these lines, you'll have realised the effect of speech marks – they tell the CPC to print everything that's between them. If we leave them out, the CPC works out the sum and prints the answer instead, which is seven.

The reason you didn't notice this earlier, if you think about it, was because the answer to the sum '4' doing nothing is '4'.

Follow the leader

Before we write our big program, there are a few more things to learn. First, not everything to be printed on the same line has to be in the same PRINT command. Type in and run the following program:

```
10 PRINT "Amstrad"
20 PRINT "Action"
```

The results are the words *Amstrad Action* printed on separate lines. Let's add one single symbol to the very end of line 10, though:

```
10 PRINT "Amstrad";
```

Did you notice the ';' on the end? We don't have to type in line 20 again because you've already done it once and it's still in memory, incidentally. This time, you should see the two words printed on the same line. There isn't a space between the two words, but you can insert one of those by altering line 20:

```
20 PRINT " Action"
```

But what is actually happening here? Well, if you think about it, the PRINT command acts as a kind of typewriter – it displays the letters it's told to and then takes great delight in pushing that little lever and sending the carriage whanging back to the beginning of the next line. In fact, we'll call that last part a carriage return. When we put a semi colon after the quotation marks, we're telling the PRINT command not to send the carriage back. It's as simple as that.

This symbol also means we can string things together:

```
PRINT "Six plus seven is";6+7
```

I think you can see how easy our times tables program is going to be...

The first program

This is it – we've got what it takes to write a seven times tables program, as long as we remember that the CPC's multiplication symbol is a '*':

```
10 PRINT "1 times 5 is";1*5
20 PRINT "2 times 5 is";2*5
30 PRINT "3 times 5 is";3*5
40 PRINT "4 times 5 is";4*5
50 PRINT "5 times 5 is";5*5
60 PRINT "6 times 5 is";6*5
70 PRINT "7 times 5 is";7*5
80 PRINT "8 times 5 is";8*5
90 PRINT "9 times 5 is";9*5
100 PRINT "10 times 5 is";10*5
110 PRINT "11 times 5 is";11*5
120 PRINT "12 times 5 is";12*5
```

It's a bit long winded, isn't it? For all those who blindly type everything in as you go along without reading the whole article first, you've just learnt your lesson – there is a much simpler way of doing this sort of thing with loops...

Filling you in

Oops – it appears that we made a teensy bit of an oversight a few months ago, when she drew rockets on the screen – 464 owners don't have the FILL command on their machines, which is why the programs didn't work for them. Sorry n'all.

"PRINT?"

As a handy tip to speed up your work, you don't always have to use the PRINT command in full – if you typed:

```
?5+3
```

You'd get the answer as 8 just as you would if you'd have used the PRINT command in full. If you typed in a program line as:

```
10 ?"Wibble"
```

It would get automatically padded out as:

```
10 PRINT "Wibble"
```

Just thought you might like to know.

Loops

Now don't deny it – I know for a fact that Clur has introduced you to the GOTO command before. The idea is that if, on line 20 of a program, you wanted the CPC to carry on from line 70 instead of line 30, you'd use:

```
20 GOTO 70
```

And the CPC would jump to that line. So if we had the program:

```
10 PRINT "Wibble"
20 GOTO 10
```

It would carry on printing forever. Bummer, eh? What if we wanted to print it, say, 12 times?

```
10 FOR a=1 TO 12
20 PRINT "Wibble"
30 NEXT a
```

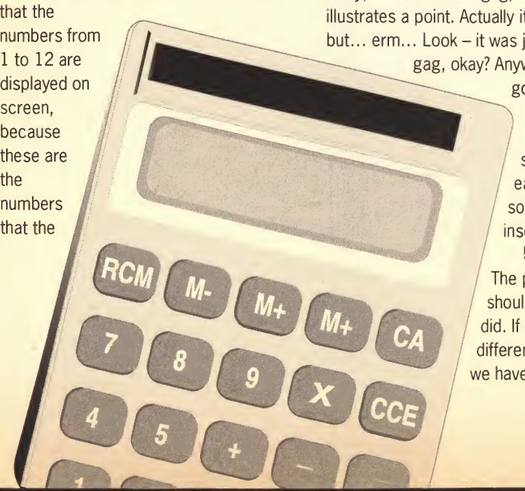
Oh ick – a complex fing. Let's take a look at line 10 a bit more closely – it's saying that FOR this loop, **a** will equal (=) all the numbers from 1 to 12. This means, as there are 12 numbers from 1 to 12 inclusively, that we want this loop to go around 12 times.

Line 30 is a bit simpler; it's telling the CPC that **a** should be increased to the NEXT number, which means going back to the FOR command on line 10.

If all of this isn't making sense in your head right now don't worry too much – it's not vitally important that you know how this works straight away. Let's try something a bit more scary (you can tell he's getting into the swing of this – Dave):

```
10 FOR a=1 TO 12
20 PRINT a
30 NEXT a
```

If you give this one a try, you'll find that the numbers from 1 to 12 are displayed on screen, because these are the numbers that the variable **a** contained when the loop is repeated (that's what the FOR/NEXT loops are all about as explained earlier).



A giant leap...

From here on, we've pretty much got everything it takes to do this properly now – all we're going to do is alter line 20 in the last program:

```
20 PRINT a;"times 7 is";a*7
```

Confused yet? Run the program, and you should be pleased.

But I know my sevens!

It is a bit of a problem, isn't it? Well, seeing as Clur so eloquently explained variables (letters that represent numbers), I think we can safely use another one:

```
20 PRINT a;"times";b;"is";a*b
```

It does get a little difficult to follow, what with all the speech marks and semi colons, but what we're printing is the value **a**, the word "times", the mystery value **b**, the word "is", then the result – **a*b**. What's b, though?

2b or not 2b...

Okay, so it's a rotten gag, but it illustrates a point. Actually it doesn't, but... erm... Look – it was just a rotten gag, okay? Anyway, **b** is going to represent the number seven in our earlier version, so that if we insert the line:

```
5 b=7
```

The program should run as it did. If we want a different table, all we have to do is change the figure in line five, which is a lot easier than going through the program changing the thing by hand.

There is another little method, though, which makes your program even better – you've used it already in an earlier installment, so let's give a big hand for the INPUT command...

```
5 INPUT b
```

So now when you run your program, you'll be able to type in the table you want, and the CPC will do all the working out (and why not? That's what it was designed for). There are no limits, either – if you wanted your 3.487 tables, you could get them, as you could your 138s.

That's what makes BASIC and computers in general so powerful – they just go ahead and do exactly what you tell them, no matter how complex the numbers are, or how long it takes.

This is one of the main features of computers that makes them so useful – they know numbers because that's all they basically are, and they'll do whatever you tell them without asking any stupid questions. This may make me sound like a total sociopath, but it makes sense – computers are only any use to us because they don't think for themselves; they do exactly what we tell them to instead. Over the future episodes of Basically BASIC, we'll be finding out just how far we can push the CPC before it says, "no!" AA

FOR/NEXT month

What do you want to learn? If there's an aspect of BASIC that's puzzling you, why not write in and let me know – we might be able to help you out, and teach the mass BASIC learning population something at the same time. If you do have a query, why not write on in to Basically BASIC at the usual address, and we might just be able to help you out. Failing that, next month we'll be looking at making pretty patterns on the screen (how about a colour spread for that one, Dave?).

ULTRA SOFTWARE

NEW SERVICE – PRODUCT GUIDE HOTLINE

☎ (0295) 73 00 60

FOR DETAILS OF A GREAT SPECIAL OFFER SEE OUR OTHER ADVERT TOWARDS THE FRONT OF THIS ISSUE!

BUSINESS, APPLICATIONS & UTILITIES SOFTWARE

Disc Base (464/6128) .....£12·45
Find your files with ease using this fast organiser
Home Accounts (464/6128) ...£14·95
Handles bank accounts, savings and credit cards
General Ledger 6128 .....£29·95
Simplified book-keeping for the small business
Proprint .....£15.95 (ROM £24·95)
Improve your Protext presentation
Page Publisher (128K) .....£24·95
Excellent Desk Top Publisher given 85% in AA100
Picasso Art (runs on 64K CPC's)...£14·95
Powerful art package with unique 'free rotation'
Micro Design Plus (128K) .....£29·95
Fast Desk Top Publishing package
Gripper (128K) .....£15·25
Search out those sprites with this excellent utility "if you've got 128K, get Gripper" - Amstrad Action
Mailing List (464/6128) .....£12·45
Address management and printing made simple
Graph Master (464/6128) .....£14·95
Display your figures as pies, bars, lines and more
Stock Accounting 6128 .....£39·95
Integrated stock control and invoicing
DES .....£14.95 (2 ROMS £24·95)
New Desktop Environment System – see AA102
Picture Discs 1 & 2 .....each £12·45
Clip art for Page Publisher/Stop Press (please state)
Smart PLUS .....£14.95 (TAPE £13·95)
Take advantage of your "plus" machines enhanced graphics capabilities with this superb art package - all the normal features are also present
Comparator (128K) .....£15·25
The ultimate in programming utilities, excellent for both experts and beginners alike

All serious programs are supplied on 3" disc unless otherwise stated above

PROGRAMMERS

WE WISH TO FURTHER EXPAND OUR RANGE OF SOFTWARE. IF YOU'VE WRITTEN A PROGRAM AND WOULD LIKE US TO SELL IT FOR YOU THEN WRITE FOR DETAILS OF OUR EXCELLENT TERMS. SEND US A SAMPLE AND WE'LL CARRY OUT A FREE – NO OBLIGATION – EVALUATION

GAMES SOFTWARE

	TAPE	3" DISC
Fluff (PLUS only)	£5·95	£7·95

Console style platformer utilising "plus" graphics.. Featured last month, reviewing this (maybe)

Ball Bearing .....£3·95.....£5·95
Guide your ball through the maze while avoiding the numerous hazards

Justice .....£3·45 .....£4·95
Graphic adventure "a really good example of what can be done when someone with real imagination sits down to write an adventure" – AA99

PICK YOUR OWN COMPILATION

CHOOSE EITHER 2,4 OR ALL OF THESE GREAT GAMES WHICH WERE FEATURED IN AA99

	TAPE	3.5" DISC	3" DISC
ANY 2	£3·45	£4·45	£4·95
ANY 4	£6·45	£7·45	£7·95
ALL 6	£8·45	£9·45	£9·95

Cloaker - Cloak your 14-strong fleet ready for battle
Mantis - Rescue the caved terraformers with 3 craft
PZP - Take part in a game of intergalactic tug-o-war
General X - Promote your 10 units to general status
Pacifist - Save 3 armies from destroying each other
Sector 5 - You must be 1st to conquer five sectors

BLANK DISCS & CASES

	x1	x5	x10	x20
3" CF2 Discs	£1·75	£7·95	£13·95	£26·95
3·5" Branded	£0·85	£3·95	£6·95	£12·95
3·5" Bulk Discs	£0·55	£2·95	£4·95	£9·45
5·25" Branded	£0·65	£2·95	£4·95	£8·95
5·25" Bulk Discs	£0·55	£2·45	£3·95	£7·45
3"/3·5" Cases	£0·65	£2·95	£4·95	£8·95

BUY 100 3" DISCS FOR ONLY £119.95

3"/3·5" Disc Labels: 20 - £0·65 50 - £1·25 100 - £1·95
5·25" Disc Labels: 20 - £0·45 50 - £0·95 100 - £1·45

DRIVE CLEANERS

3" Disc Head Cleaner £3·95
3.5" Disc Head Cleaner £3·95
5·25" Disc Head Cleaner £3·95

CLEANER OFFER
Disc Head Cleaner - PLUS
10 x 3" Maxell Discs - £16.95
10 x 3.5" Branded Discs - £8.95
10 x 5.25" Branded Discs - £7.95

ACCESSORIES

MOUSE BITS
Mouse Mat £2.95
Mouse House £1.95
BOTH ONLY £3.95

DUST COVERS
Keyboard £3.95
Monitor £4.95
BOTH ONLY £7.95

CUSTOM LEADS
CPC to PLUS Monitor
PLUS to CPC Monitor
Joystick Splitter RS232 1-1 25 pin
ONLY £·.95 EACH
CPC H/W to PLUS - £14·95

QUALITY PRINTER RIBBONS

Mono - Price Band A: 1 - £2.45 2 - £3.95 5 - £8.95 10 - £16.95
Star LC10/20/100 Amstrad DMP2000/2160/3000/3160/400
Mono - Price Band B: 1 - £2.95 2 - £4.95 5 - £10.95 10 - £19.95
Star LC200 Star LC24-100/200 Citizen120D Swift 9/24
Seikosha SP1900+ Epson LX400/800 LQ400/570/800/870
Mono - Price Band C: 1 - £3.45 2 - £5.95 5 - £12.95 10 - £22.95
Panasonic KX-P1123/1170 Amstrad PCW8512/8256/9512
Amstrad LQ3500 Mannesmann Tally MT80/81 /85/86
Multi-Coloured BUY 2 & SAVE £2 BUY 5 & SAVE £8
Star LC10/100 - £8.95 LC200 - £9.95 LC24-200 - £10.95

WE ALSO SELL

PRINTERS & 100s MORE RIBBONS – OUR LATEST PRODUCT GUIDE HAS ALL THE INFO – PHONE (0295) 730060 FOR YOUR COPY

PAPER/LABELS

	x100	x500	x1000	x2000	x4000
11" x 9.5" Listing Paper	£1.95	£6.95	£10.45	£17.95	£29.95
Exact A4 Listing Paper	£2.45	£8.45	£12.95	£23.95	£41.95
3.5" x 1.5" Address Labels	£1.45	£5.45	£7.95	£12.95	£19.95
Coloured* Address Labels	£2.45	£7.95	£11.95	£19.95	£34.95

* Available in blue, red, yellow & green - or assorted

EXTRAS

1 for £6·45 2 – £11·95
3 – £16·95 4 – £20·95
CPC to Printer lead
Universal Printer Stand
A4 Copy Holder
Printer Dust Cover

DISC STORAGE

10 3.5"/6 3" capacity Library Case £1.75
40 3.5"/30 3" capacity Lockable Box £5.45
80 3.5"/60 3" capacity Lockable Box £6.45
50 5.25" capacity Lockable Box £6.45
100 5.25" capacity Lockable Box £7.45

DISCS & BOXES OFFER

Disc Head Cleaner, Disc Storage Box PLUS

3" Maxell Discs	x30 £45.95	x60 £84.95
3.5" Branded Discs	x40 £29.95	x80 £49.95
3.5" Bulk Discs	x40 £23.95	x80 £39.95
5.25" Branded Discs	x50 £23.95	x100 £39.95

NEW Product Guide available - Write or phone for yours. Postage in Britain is FREE. Overseas please add 20% Please make cheques/postal orders (sorry no credit cards – yet!) payable to ULTRA SOFTWARE and send your order to Ultra Software (AA104). Fulling Mill, Broughton, Banbury, Oxon OX15 6AP

WIZARD GAMES

• Any two Dizzy Games for £5 •

1 NORTH MARINE ROAD, SCARBOROUGH, NORTH YORKSHIRE YO12 7EY. IF YOU'RE IN THE SCARBOROUGH AREA, COME IN AND SEE US. OPEN: Mon-Sat 9.00am-5.30pm, TEL: 0723 376586

AMSTRAD CASSETTES

ARCADE FRUIT MACHINE	£6.99	G-LOC (128)	£9.99
ARKANOID REVENGE OF DOH	£9.99	GAUNTLET 3 (128)	£3.50
ADDAMS FAMILY 128 only	£3.75	INTERNATIONAL FOOTBALL	£9.99
BALLOON BATTLES	£9.99	JETSONS	£3.99
BONANZA BROTHERS	£9.99	JAHANGAR KHAN SQUASH	£9.99
BUBBLE BOBBLE	£3.75	LEAGUE CHALLENGE	£9.99
CRICKET CAPTAIN	£9.99	LEAGUE FOOTBALL	£9.99
CRYSTAL KINGDOM DIZZY	£9.99	LINE OF FIRE	£9.99
CHIPS CHALLENGE	£9.99	MASTERS OF THE UNIVERSE	£9.99
COLOSSUS BRIDGE	£9.99	MOTOR CYCLE 500	£9.99
DAN DARE	£1.99	MULTI-PLAYER SOCCER	£9.99
DARKMAN	£3.75	MINI OFFICE	£9.99
DIZZY PRINCE OF YOLKFOLK	£3.75	NARCO POLICE	£9.99
EDD THE DUCK	£9.99	PLAYDAYS AGE 3-8	£4.99
EUROPEAN SUPER LEAGUE 128	£9.99	RAINBOW ISLAND	£3.75
F15 STRIKE EAGLE	£9.99	SIMPSONS	£3.75
FIRST PAST THE POST	£9.99	SOOTY'S FUN WITH NUMBERS - UP TO 7 YEARS	£4.99
FUNSCHOOL 2 - UNDER 5-6-8	£3.75	STRIKE	£2.99
		TERMINATOR 2	£3.75
		TEST MASTER	£2.99
		THOMAS THE TANK FUN WITH WORDS AGE UP TO 7	£4.99
		TREBLE CHAMPIONS	£2.99
		WAY OF THE EXPLODING FIST	£2.99
		YES, PRIME MINISTER	£1.99
		MIG 29	£2.99
		ON THE BENCH	£2.99
		PEGASUS BRIDGE	£1.99
		PLATOON	£2.99
		PROFESSIONAL FOOTBALLER	£2.99
		RETURN OF THE JEDI	£2.99
		SOCCER DOUBLE 3	£2.99
		SPELLBOUND DIZZY	£3.75
		STAR WARS	£2.99
		SUPER OFF ROAD	£2.99
		SWORD OF THE SAMURAI	£2.99
		TETRIS	£2.99
		THE EMPIRE STRIKES BACK	£2.99
		TRAP DOOR DOUBLE PACK	£1.99
		TREBLE CHAMPIONS	£2.99
		TRIVIAL PURSUIT	£2.99
		TURBO THE TORTOISE	£2.99
		WEC LE MANS	£2.99
		WRESTLING SUPERSTARS	£2.99

DIZZY SPECIALS
DIZZY PANIC ● BUBBLE DIZZY
FAST FOOD ● FANTASY WORLD
SPELL BOUND DIZZY
MAGIC LAND DIZZY
DIZZY DOWN THE RAPIDS

ANY 2 FOR £5.00

CASSETTES OUR CHOICE MIXED TITLES 10 FOR £5.00

CASSETTE COMPILATIONS

MOVIE PREMIER £3.99
BACK TO THE FUTURE II/TEENAGE MUTANT HERO TURTLES/GREMLINS 2/ DAYS OF THUNDER

T.N.T. 2 .....5.99
HYDRA/SKULL + CROSSBONES/ESCAPE FROM THE PLANET OF THE ROBOT MONSTERS/BADLANDS/STUN RUNNER

SUPREME CHALLENGE 4.99
ELITE/STARGLIDER/TETRIS/ACE II/THE SENTINEL

CHART ATTACK 3.99
LOTUS ESPRIT/TURBO CHALLENGE/SUPERCARS/SHADOW OF THE BEAST/IMPOSSAMOLE/GHOULS 'N' GHOSTS

SOCCER SPECTACULAR 4.99
FOOTBALL MANAGER/PETER BEARDSLEY'S INT FOOTBALL/WORLD CHAMPIONS/PETER SHILTON'S HANDBALL MARADONA/ SOCCER SUPREMO

THE DREAM TEAM 7.99
THE SIMPSONS (BART VS THE SPACE MUTANTS)/WWF/TERMINATOR 2

30 RED HOT HITS 4.99
GHOSTBUSTERS/FA CUP/AENT X 2/KANE/L A SWAT/NINJA MASTER/RASPUTIN/OLLIE + LISSA/RICOCHET/ZOLYX/WAY OF THE EXPLODING FIST/DAN DARE/FORMULA 1 SIM/BRIAN JACK'S SUPERSTAR CHALL/TAU CETI/I BALL/PARK PATROL/THRUST/HARVEY HEADBANGER/WAR CARS/TARZAN/NINJA HAMSTER/ENLIGHTENMENT/DRUID II/THE BOGGIT/MYSTERY OF THE NILE/MEGA APOCALYPSE/ENDURANCE/ACTIVATOR/ CATCH 23/DARK SCEPTIC

TENGEN TRILOGY 3.99
KLAX/CYBERBALL/ESCAPE FROM THE PLANET OF THE ROBOT MONSTERS

THE BIZ 4.99
DOUBLE DRAGON 2/R TYPE/OPERATION WOLF/BATMAN

MEGA HOT 2.99
ATV/PINBALL/BMX/TENNIS/RUGBY/ MIG 29/FRUIT/GPS

MEGA MIX 4.99
OPERATION WOLF/DRAGON NINJA/REAL GHOSTBUSTERS/BARBARIAN 2

COIN OP HITS 2 .....4.99
DYNASTY WARS/NINJA SPIRIT/WIGILANTE/HAMMERFIST/ GHOULS 'N' GHOSTS

10 SPECTACULAR GAMES4.99 (FRENCH INST)
IMPOSSAMOLE/ROAD RUNNER/FOOTBALLER OF THE YEAR/E MOTION/BUTCHER HILL/GARY LINEKAR'S HOT SHOT/NIGHT RAIDER/SIDE ARMS/STREETFIGHTER/SKATE CRAZY

QUATRO RACERS 3.99
BMX FREESTYLE/CHAMPIONSHIP JET SKI/ATV SIMULATOR/BMX SIMULATOR 2

QUATRO SUPER HITS 2.99
SUPERTANKS/SUPER HERO/ SUPER STUNTMAN/ITALIAN SUPERCAR

QUATRO ADVENTURE 2.99
GHOSTHUNTERS/ SUPER ROBIN HOOD/DIZZY/VAMPIRE

COMBAT PACK 3 .....3.99
NINJA COMMANDO/BIONIC NINJA/ SPAGHETTI WESTERN/2088

COMPUTER HITS VOL 5 .....3.99
WIZARDS LAIR/212 AD/CONTRAPTION/KETTLE/ ATTACK OF THE KILLER TOMATOES

DIZZY COLLECTION 4.99
DIZZY/FAST FOOD/FANTASY WORLD DIZZY/TREASURE ISLAND DIZZY/ MAGICLAND DIZZY

CARTOON COLLECTION 4.99
DIZZY/CJ'S ELEPHANT ANTICS/SLIGHTLY MAGIC/SPIKE IN TRANSILVANIA/ SEYMOUR GOES TO HOLLYWOOD

DIZZY'S EXCELLENT ADVENTURES 4.99
DIZZY PANIC/DIZZY DOWN THE RAPIDS/PRINCE OF THE YOLKFOLK/SPELLBOUND DIZZY/ KWICK SNAX DIZZY

POSTMAN PAT COLLECTION 3.99
POSTMAN PAT 1,2 + 3

POPEYE COLLECTION 3.99
POPEYE 1,2 + 3

KIDS PACK 1 .....4.99
POSTMAN PAT/SOOTY + SWEEP/COUNT DUCKULA/POPEYE D/THE WOMBLES/ SUPER TED

KIDS PACK 2 .....4.99
FIREMAN SAM/COUNT DUCKULA 2/POPEYE/POSTMAN PAT 2/HUXLEY PIG/

BANGERS + MASH

COMPUTER HITS 4 .....4.99
BRIDE OF FRANKENSTEIN/SPINDIZZY/PULSATE/ ANTIRIAD/REVOLUTION/TRIAXOS/ DEACTIVATORS/ UCHI MATA/CITY SLICKERS/STAR QUAKE/ELEKTRAGLIDE/DANDY

WIZARD PACK 1 .....3.99
(FRENCH INSTRUCTIONS)
CYBERNOIDS/NORTH STAR/EXOLON/ VENOM STRIKE BACK/ MARAUDER/HERCULES/DEFLEKTOR/BLOOD BROTHERS/RANARAMA/NEBULUS/MASK

WIZARD PACK 2 .....2.99
(FRENCH INSTRUCTIONS)
MOTOR MASSACRE/GARY LINEKAR'S HOT SHOT/ARTURA/MARAUDER/NIGHTRAIDER/ JACK THE NIPPER/TECHNO COP/BOUNDER/ SUPER STAR SOCCER/MONTY

INTEGRAL ...3.99 (FRENCH INSTRUCTIONS)
LOTUSESPRIT/SUPERSCRAMBLE/SUPERCARS/ TOYOTA CELICA GT

THE NINJA COLLECTION 3.99
DOUBLE DRAGON/SHADOW WARRIORS/ DRAGON NINJA

SPORTS COLLECTION 3.99
PRO TENNIS TOUR/ RUN THE GAUNTLET/WORLD CUP ITALIA 90

RAINBOW COLLECTION.....5.99
RAINBOW ISLAND/BUBBLE BOBBLE/ NEW ZEALAND STORY

HOLLYWOOD COLLECTION 4.99
GHOSTBUSTERS 2/INDIANA JONES LAST CRUSADE/ROBOCOP/BATMAN THE MOVIE

2 HOT 2 HANDLE 4.99
SHADOW WARRIORS/TOTAL RECALL/GOLDEN AXE/SUPER OFF ROAD

POWER UP 4.99

ALTERED BEAST/RAINBOW ISLAND/X OUT/ CHASE H.Q./TURRICAN

GAME SET + MATCH 2 .....4.99
TRACK + FIELD/IAN BOTHAMS TEST MATCH/BASKET MASTER/SUPER HANG ON/NICK FALDO'S OPEN/CHAMPIONSHIP SPRINT/MATCHDAY 2/STEVE DAVIS SNOOKER

AMSTRAD DISKS

AA.D.A.M. ASSEMBLER + DISASSEMBLER MONITOR £5.99
ARACHNOPHOBIA £3.99
BONANZA BROTHERS £5.99
CAPTAIN BLOOD £6.99
CISCO HEAT £6.99
COLOSSUS CHESS.....£6.99
EQUINOXE - MUSIC SOUNDTRACKER, COMPOSE YOUR OWN MUSIC WITHOUT MUSICAL KNOWLEDGE ...12.99
FOOTBALL MANAGER 3 ...£8.99
HERO QUEST £4.99
JET BIKE SIM.....3.99
LOTUS ESPRIT.....£6.99
MERCS £7.99
MONTY PYTHON'S FLYING CIRCUS.....£4.99
MYTH £7.99
NIGEL MANSELL £8.99
PROBAX 3.99
ROCK STAR ATE MY HAMSTER3.99
SUPER CARS £6.99

KID SPECIALS
SOOTY'S FUN WITH NUMBERS £8.99

THOMAS THE TANK ENGINE FUN WITH WORDS £8.99

BOTH AGE UP TO 7 YEARS ... .£15.00 FOR TWO

DISK COMPILATIONS

INTEGRAL (FRENCH INSTRUCTIONS) £9.99
LOTUS ESPRIT/SUPER SCRAMBLE/TOYOTA CELICA GT/SUPER CARS

GALACTIC GAMES £5.99
100M SLITHER/SPACE HOCKEY/PSYCHIC JUDO/ HEAD THROWING/METAMORPH MARATHON

4 SOCCER SIMS £4.99
11-A-SIDE SOCCER/5-A-SIDE INDOOR/ STREET SOCCER/SOCCER SKILLS

HERO QUEST £7.99
+ RETURN OF THE WITCH LORD

DARK FORCE £6.99
MIDNIGHT RESISTANCE/NIGHTBREED

COMPUTER HITS 4 £7.99
ANTIRIAD/REVOLUTION/DEACTIVATORS/DANDY /STARQUAKE/SPIN DIZZY/ELEKTRAGLIDE

VOL 2 4.99 (FRENCH INSTR)
SUPER STUNTMAN/VAMPIRE/DIZZY/GRAND PRIX

SIMULATOR VOL 1 3.99 (FRENCH INSTR)
GHOST HUNTERS/PRO SNOOKER SIM/PROFESSIONAL SKI SIM

PRICE BREAKTHROUGH
GX4000/6128+/464+ CARTRIDGES
SWITCHBLADE £6.99
NO EXIT £7.99

BLANK 3" DISKS EX SOFTWARE .....10 FOR £7.99 OR £1 EACH
100 CAP 3! - 3" DISK BOX £5.99
PYTHON 1 JOYSTICKS £9.99
ZIPSTICK £12.99
CRUISERS £9.99

4 SOCCER SIMS
SOCCER STAR
SNOOKER MANAGEMENT
STRIKER
FOOTBALL DIRECTOR
INT TENNIS
BANGER RACING
GRAND PRIX SIM
1ST DIVISION MANAGER
THE BOXER
LEAGUE FOOTBALL
INT FOOTBALL
RUGBY COACH
PRO TENNIS

ANY 3 SPORTS GAMES £5.00 + P&P PLEASE GIVE 1 ALTERNATIVE

GAMES SUBJECT TO AVAILABILITY. PLEASE NOTE - A PHONE CALL RESERVES YOUR ORDER.. CHEQUES + POSTAL ORDERS MADE PAYABLE TO WIZARD GAMES
OVERSEAS £1.00 PER ITEM P+P. ORDERS £5 AND UNDER ADD 50P P+P

Back issues

Don't miss out on this amazing cost-cutting special offer!!! The more you buy the more you save!!!

Check out these crazy prices

1 back issue.....£2.50
2 back issues.....£4.50
3 back issues.....£6.50
4 back issues.....£7.50
All extra issues.....add £1.50 for each

*** These prices apply to the UK only, see below for overseas prices.**

AA66: Features: Complete guide to games-playing, simulators. Reviews: *Supercars, Robocop 2, North and South, Strider 2, Mystical, Golden Axe, Narco Police.*

AA75: *Cisco Heat* (demo), *Impossaball, Tir Na Nog.* Inside: Buyers' guide to peripherals., *Smash TV, Turtles Coin-Op.*

AA76: Covertape: *Graphic Adventure Creator, PageMaker Plus, Southern Belle, Extended BASIC for 464 owners.* Inside: Peripherals part 2, *Dizzy's Excellent Adventures, The Simpsons, Super Space Invaders, OutRun Europa, Cisco Heat, Pithfighter.*

AA77: Covertape: *Seymour Take One* (mini game), *Firelord, Football Forecaster,* Fonts. Inside: The French Connection, GAC tutorial. Reviews: *You're Learning* (educational pack), *Paperboy 2.*

AA78: Covertape: *Space Crusade* (demo), *The Sphinx Jinx, Shockway Rider.* Inside: Guide to PD. Reviews: *Space Crusade, Double Dragon 3.*

AA79: Covertape: *Ranarama, Maze Mania, Meaning Business* (suite of business utilities). Inside: Behind the scenes at AA. Reviews: *Blues Brothers, Rodland, Prehistorik.*

AA80: Covertape: *Stryker and the Crypts of Trogan* (demo), *Anarchy, Croco Magneto, GPaint.* Inside: How a game is made (Seymour), buyers' guide to word processors. Reviews: *Titus The Fox, Stryker.*

AA81: Covertape: *Forbidden Planet, The Addams Family* (demo), *Sprite Designer.* Inside: Fanzines, buyers' guide to DTP.

AA82: Covertape: *Lemmings* (demo), *Dragontorc, PowerPage.* Inside: Making dosh from programming, guide to art packages. Reviews: *Lemmings, Addams Family.*

AA83: Covertape: *Defenders of the Earth* (demo), *Drehdriss, Supersonic* (music). Inside: The French CPC scene, buyers' guide to educational software. Reviews: *Turbo the Tortoise, Grell and Fella.*

AA84: *Famous Five on a Treasure Island, Notepad, Liteprog.* Inside: 3D games. Reviews: *Hideous, Brunword ROM.*

AA85: Covertape: *On The Run, Link, Worktop, Disk Organiser.* Inside: Making music. Reviews: *American Tag Team Wrestling, Soccer Pinball.*

AA86: Covertape: *Glider Rider,* animation utilities. Inside: MIDI music. Reviews: *Wild West Seymour, Reckless Rufus.*

AA87: Covertape: *Nexor, Pakman, MPack, Pilot* (very simple programming language). Inside: Dizzy, this is your life. Reviews: *Football Manager 3, Super Seymour.*

AA88: Covertape: *Tankbusters, Penguins, JL-Copy* (tape to disk utility). Inside: *Videomaster,* top CPC add-ons. Reviews: *The Shoe People, Crystal Kingdom Dizzy, Robin Hood.*

AA89: Covertape: *Wriggler, MagicDOS, Superchars.* Inside: The European demo scene. Reviews: *Zap't'Balls, Crazy Cars 3.*

AA90: Covertape: *Steve Davis Snooker, LARA* (Machine Code Utility). Inside: 100s of Multiface POKEs. Reviews: *Nigel Mansell's World Championship, Popeye Collection.*

AA92: Covertape: *BooTracker* (music program), *Syntax, Balloon Buster.* Inside: Complete guide to data storage. Reviews: *Soundtrakker, The Simpsons.*

AA93: Covertape: *Racing Boxform, Mystical, Who's Afraid Of The Balrog?* Inside: Spreadsheets and databases, setting up a PD library, *Super Cauldron.*

AA94: Covertape: *Instant Recall* (database), *Contraption.* Inside: The best of everything – the AA awards ceremony. Reviews: *MicroDesign 2, Disc Archiver, Prehistorik 2.*

AA95: Covertape: *MasterCalc* (spreadsheet), *Biff.* Inside: *Street Fighter 2* – the myth starts here. Reviews: *Pro-Ext, SmArt Plus, Trakers.*

AA96: Covertape: *Screen Designer, Neil Android.* Inside: ROM round-up, Campursoft interview. Reviews: *ZXM, Xexor, Cart round-up.*

AA97: Covertape: *Zzap Assembler, Rik The Roadie.* Inside: The best software you can get for under a fiver, a guide to debugging. Reviews: *Ultimate Sprite Searcher, Forth, Galactic Warfare, Ball Bearing.*

AA98: Covertape: *The Blues Brothers* – complete five-level game. Inside: 50 tips to make your computing life easier, Sentinel interview, Encyclopaedia Part 1. Reviews: *Disc Imager, Zack Game Creator.*

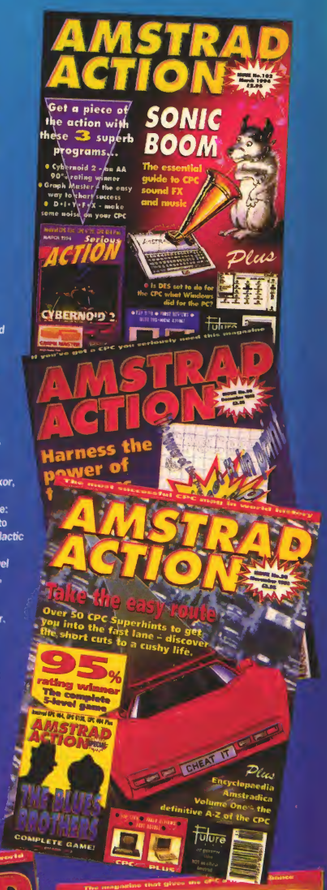
AA99: Covertape: *Stormlord, Font Editor,* Grab Converter. Inside: DTP round-up. Reviews: Homebrew software, *ProPrint ROM, Stellar Outpost,* fanzines.

AA100: Covertape: *Elite.* Inside: The Top 100 CPC products ever, a look back at 100 issues of AA. Reviews: *Touchdown, Page Publisher.*

AA101: Covertape: *Exolon, Home Accounts.* Inside: How to get things moving on your CPC – the complete guide to animation on the CPC, interview with Radical Software, Elite Masterclass.

AA102: Covertape: *Cybernoid 2, Graph Master, D•I•Y•F•X.* Inside: make some noise – your CPC's sonic capabilities, The CPC world. Reviewed: *DES* – Desktop Environment System.

AA103: Covertape: Nebulus. Speech. Inside copying devices, Fluff preview, Elmsoft interview, Shoot-'em-ups round-up, low-cost printer reviews.



Amstrad Action Back Issues

Name _____

Address _____

_____

Post code _____ **Phone No** _____

Method of payment (please tick)

Access ❑ **Visa** ❑ **Cheque** ❑ **PO** ❑

Credit Card No _____ **Expiry date** _____

New lower overseas rates:

● **Europe £4** ● **Rest of the world £6**

I would like the following back issues...

_____

Cost of back issues £□□.□□

Please add £1 for postage and packaging £□□.□□

Total cost £□□.□□

Please make all cheques payable in pounds sterling to Future Publishing Limited, and send the whole lot off to AA Subscriptions, Future Publishing, FREEPOST, Somerton, Somerset TA11 7BR.

Assembly Line

All the machine code disc routine-type commands you'll ever need (apart from the ones you really need but don't exist, but don't blame that on Simon – he just writes the articles, not the programming language).

Hell hath no fury like a tape-deck user scorned, but I'm going to risk their wrath by devoting the entire two pages of Assembly Line this month to disc operations, such as copying, formatting and even verifying. Before we jump straight in at the deep end, we're going to have a little re-cap on discs and the way they work with the CPC.

We'll deal with data format discs, as they're the format that most people stick with (you can fit 178k on them, as opposed to 169k with a system format disc). A data disc has 40 tracks, numbered from 0 to 39. Track 0 is the directory track, so we can't store any data on it if we want to use the disc as a normal AMSDOS filing device. The format for a directory track is exactly the same, though, so we don't really have to make too many special arrangements when we're dealing with it.

We all have fun writing programs, don't we? So, that may not be exactly true, but this time you've got it real easy – I'm going to do them. One thing I'll stop doing this month is simplifying my examples, so if I can take a shortcut with anything, I will (within reason).

One other point – these are not stand-alone programs, but routines. For the most part, all you'll have to do is call them and let them run their own way.

Before we go any further, there's something else you need to know – each of these routines requires a few lines of set-up code before they'll run properly. Those lines look like this:

```
.setup :ld a,&ff
        rst 3,setmsg
        ld a,0
        rst 3,setrty
        ret
```

Finally, you'll notice that these routines use calls to the disc ROM. To get any of the programs in this article to work, you'll need to insert this little jumpblock anywhere in the listing where it won't interfere with the main program:

```
.selfrm:dw &c581,7
.setrty:dw &c603,7
.secwrt:dw &c64e,7
.frmtrk:dw &c652,7
.secred:dw &c666,7
.setmsg:dw &ca72,7
```

You'll also need to place a 512-byte buffer somewhere in memory, named BUFFER, for a few of the routines to work properly.

Errors

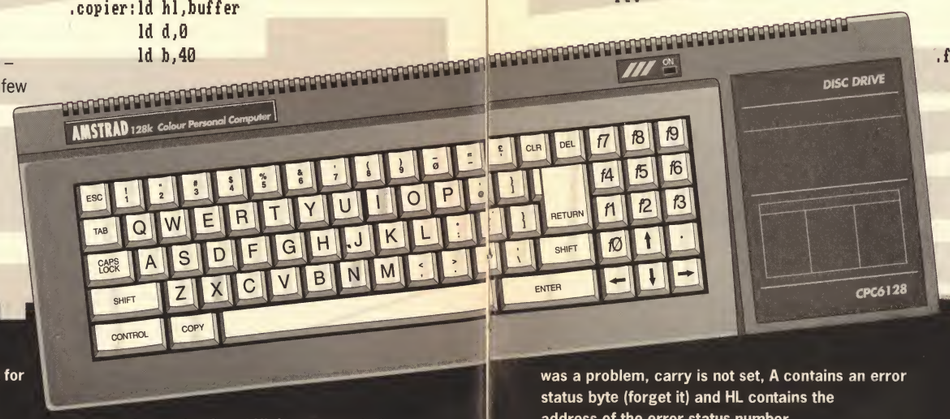
Though these routines are fairly self-contained, they don't compensate for any errors during operation (by displaying error messages or anything along those lines). If there is a problem, though, you'll be able to tell from within your program as the accumulator will not contain zero. Basically, when the routines return, if they contain &ff (255), then something went wrong at some point along the line. So now you know.

Copying

It seems like a good place to start, as we'll be able to recap last month's Assembly Line which dealt with sector reading and writing. Because we don't want to have to deal with loads of messages asking for disc swapping, we'll write an A to B copier, for people with two drives. Next month, Type-Ins will feature a full assembly language copier, with a hex loader for those who don't see the need to assemble it.

This routine does sod all, really. As soon as you execute it, it goes its own sweet way and starts copying, only stopping to say it's finished or there's something wrong.

```
.copier:ld hl,buffer
        ld d,0
        ld b,40
.coplpa:push bc
        ld c,&c1
        ld b,9
.coplpb:ld e,0
        rst 3,secred
        jp nc,coperr
        ld e,1
        rst 3,secwrt
        jp nc,coperr
        inc c
        djnz coplpb
        inc d
        pop bc
        djnz coplpa
        ld a,0
        ret
.coperr:ld a,&ff
        ret
```



Firmware

During this spread, we've been using a lot of new firmware routines in the disc ROM. In case you were wondering exactly what they all did, here they are in detail:

BIOS: Set message – &ca72
Turns AMSDOS error messages either on or off, a state indicated by the accumulator on entry. If A contains &00 error messages are enabled, but &ff will turn them off. On exit, HL and flags will corrupt, but all other registers are preserved.

BIOS: Select format – &c581
This routine sets up the disc parameter block for accessing a certain format of disc without reading from it. If the disc is selected by AMSDOS normally, it will detect the format itself, but here we want to format a disc instead of reading from it, so we need to use this instruction before writing any new tracks.

On entry, A contains either &c1 (data format), &41 (system format), or &01 (IBM format). On exit, AF, BC, DE and HL corrupt.

BIOS: Read sector – &c666
Reads in a sector from a disc. On entry, HL contains the address for the data to be placed in memory, E contains the drive number (zero for A, one for B), D contains the track number and C contains the sector.

On exit, if everything went okay, the carry flag is set, A contains 0 and HL is preserved. If there was a problem, carry is not set, A contains an error status byte (forget it) and HL contains the address of the error status number.

Whatever the weather, other flags corrupt, and all other registers are preserved.

BIOS: Write sector – &c64e
This writes a sector to a disc. On entry, HL contains the address of the data to be written to the disc, E contains the drive number (zero for A, one for B), D contains the track number and C contains the sector.

On exit, if everything went okay, the carry flag is set, A contains 0 and HL is preserved. If there was a problem, carry is not set, A contains an error status byte (forget it) and HL contains the address of the error status number.

Whatever the weather, other flags corrupt, and all other registers are preserved.

BIOS: Format track – &c652
Oh dear. This one's going to take quite a lot of explaining. All it does is format a track of a disc, but things could get a little difficult. We'll start with the entry conditions.

On entry, D contains the track number, E contains the drive number and HL contains the address of a header information table. This table is set out in an odd sort of fashion with each sector having four bytes:

1 – Track number
2 – Head number
3 – Sector number
4 – Log2 (sector size) -7

The track number needs to be updated for every track, by the way. On exit, if everything went according to plan, the carry flag will be set, A will contain zero and HL will be preserved. If things went wrong, carry will be false and A and HL will contain details of what went wrong. Whatever, other flags corrupt but all other registers are preserved.

BIOS: Retries – &c603
This sets the number of retries a user is allowed before the operation is called off and an error returned. On entry, the accumulator contains the number and on exit, A contains the old value for the retry count while HL and F (the flags) will corrupt.

Formatting

The odd thing about using separate driver routines is that all of these routines are pretty straightforward in the end. This routine is no different, as you just call it, and it formats the disc in drive A. Be very careful, though, as when I say it formats discs I really mean it – don't call this routine with any disc in the drive other than the one you don't mind being completely wiped with no hope of retrieving any data at all. You have been warned, so don't come crying to me.

```
.format:ld a,&c1
        ld e,0
        rst 3,selfrm
        ld hl,frmdat
        ld de,0
        ld b,40
.frmlpa:call frmset
        rst 3,frmtrk
        jp nc,frmerr
        inc d
        djnz frmlpa
        ld a,0
        ret
.frmerr:ld a,&ff
        ret
.frmset:push bc
        ld b,9
.frmlpb:ld (hl),d
        inc hl
        inc hl
        inc hl
        inc hl
        djnz frmlpb
        ld hl,frmdat
        pop bc
        ret
.frmdat:db 0,0,&c1,2
        db 0,0,&c6,2
        db 0,0,&c2,2
        db 0,0,&c7,2
        db 0,0,&c3,2
        db 0,0,&c8,2
        db 0,0,&c4,2
        db 0,0,&c9,2
        db 0,0,&c5,2
```

Verifying

This routine simply reads in every sector on every track, making sure none of them are unreadable. The 'making sure' bit is a bit of an exaggeration, as it just keeps reading sectors until there's an error. This is an easy solution to a more difficult problem.

```
.verify:ld hl,buffer
        ld de,0
        ld b,40
.verlpa:push bc
        ld c,&c1
        ld b,9
.verlpb:rst 3,secred
        jp nc,vererr
        inc c
        djnz verlpb
        inc d
        pop bc
        djnz verlpa
        ld a,0
        ret
.vererr:pop bc
        ld a,&ff
        ret
```

Next month

That's all there's space for this month (Dave really is such a stinge with pages, you know). Next time, I'll be taking a good look at something a lot more applicable to 464 owners who'll be protesting outside the office by the time you're reading this – we're going to write a programming toolbox that'll help us with all sorts of horrible programming problems.

In the meantime, you can do one of two things. First, you can write a single-drive copier and send it in for issue 106 – the winner will receive some stunning serious software. If you don't feel like doing that, you could send in any machine code programming hints, tips, routines, or just about anything else you feel is relevant to Home Assembly at the usual address – the best one each month will receive a cash prize (probably a measly fiver, knowing Dave).

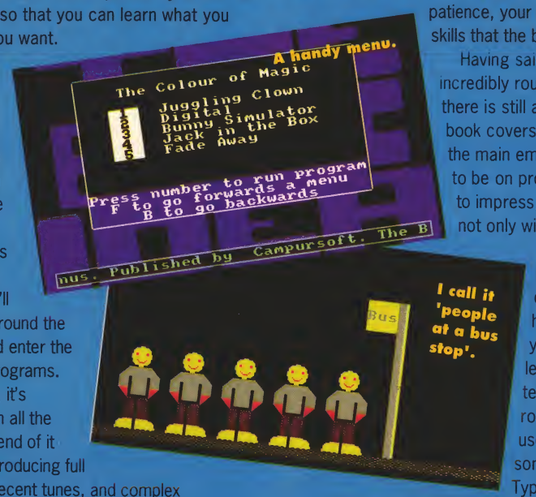
BASIC Idea

Simon fails miserably to come up with any new puns on the word BASIC in his review of a new beginners' guide to BASIC package from Campursoft. It's sad he's even trying, really.

For several months now, we've been running a BASIC tutorial series in *AA*. But some people just can't wait from month to month to discover how to access the power of their CPC. Campursoft might have timed their latest release perfectly, then; a BASIC tutorial book accompanied by a disc full of examples so that you can learn what you want when you want.

The book is designed for the total beginner to use – it starts with making a back-up of the *BASIC Idea* disc, and goes onto the very first skills you'll need to get around the keyboard, and enter the simplest of programs. From then on, it's Captain Trojan all the way – by the end of it all, you'll be producing full animations, decent tunes, and complex mathematical operations. And what's more you'll understand how you've done them.

The truth of the matter is that as a BASIC tutorial guide, this book really has to be something really special to get a glowing review – I'm a firm believer in the ability of anyone to pick up this language by simply experimenting with the odd, archaic symbols and words they find in listings with the odd reference to the CPC manual. So any tutorial will have to either be extensive in its coverage of the language, or take a hands-on learning approach, making use of the fact that the reader has the mental ability to work some things out for themselves. *BASIC Idea* has got the basic idea – it'd be almost impossible to fully detail every aspect of BASIC and so what the book can't tell you can be worked out with a bit of thought, a lot of patience, your manual and skills that the book can give.



Having said all that (in an incredibly roundabout way), there is still a lot that the book covers extensively – the main emphasis seems to be on producing things to impress, which means not only will you have something pleasing at the end of your had work, but you'll have learnt a lot of techniques and routines you can use to knock out some pretty mean Type-Ins.

Still working...

One thing we can clear up right now is that this book is written for absolute beginners. As the title suggests, it covers the basics of the language and builds on that. This means that although what we're dealing with is potentially quite complex to a lot of people, you won't be thrown in at the deep end without a rubber ring. In fact, the style is really quite excellent – nothing moves too fast, and plenty of explanation is given with every topic covered. Not only this, but the whole thing is structured in such a way that you're not just trying to memorise several BASIC commands and what they do – you'll be using what you've learnt throughout the rest of the book and, by the time you've finished, should know quite a few particular commands, routines, and techniques like the back of your hand.

But that's machine code!

It threw me at first as well – we're happily trundling along learning all about palette switching, when out of the blue pops a sprite handling routine in machine code. The most obvious reaction to this would be to run away screaming, hoping that common bacteria would kill it before it had a chance to take over the planet. It's not quite as bad as it seems, though – at no point are you expected to start thinking in a second programming language, as it's all done for you, and presented in neat bundles for you to easily use. You could just think of this as a fairly successful attempt to prove that BASIC is easily powerful enough to suit anyone's needs with the subtle addition of the odd machine code routine here and there courtesy of Campursoft. The point is, you'd be absolutely right.

If you look on this month's covertape, you'll find the *AA Toolbox*, a set of extra commands to load into your machine and use to turbocharge your CPC. In many ways, this is what Campursoft have done – sure, the stuff is machine code, but you don't have to step outside the cosy BASIC environment to use it.

Help. I think I'm having a fit.

It's all on disc

As well as the book, when you open your jiffy bag something else should fall out – a disc, stuffed full of example listings, and bits from the book that were either too long or too boring to type in yourself. This is extremely handy because when you first receive the package, you can have a quick look through the disc and see just what you'll be getting up to in the many chapters to come. Looking through the disc personally, I'm impressed – you potentially clever lot.

Sum it up, Simon

Tutorial books are never going to be a thrill-packed ride – you buy them because you want to know what goes on inside your machine, and you want to be able to use that to your advantage. It's not a wild and crazy time, no. Knowing this, it is difficult to see how Campursoft managed to come up with a tutorial that will not only hold your attention long enough to shove information down your throat, but will be friendly and straightforward enough that you'll want to swallow.

85%

Details

PRODUCT: Basic Idea
PRICE: £15
AVAILABLE FROM: Campursoft, 16 Slatefield Street, Gallowgate, Glasgow, G31 1UA
☎ 041 554 4735

Soft-Lok

Simon takes a look at a slightly different way of getting those awkward tape games onto disc.

As you should be well aware (since last issue's back-up feature), there are copying devices available on the market that'll let you back up your software to disc in case of damage, loss and other catastrophes. Probably the most popular is the Multiface, which can back-up pretty much any game you're likely to come across. If you don't want to go to the expense of a black box though, there are alternate solutions on the market, one of which is *SoftLok*.

SoftLok is a package by Rob Scott designed to transfer any games that use the *Speedlock* protection system to disc. As the protection system was licensed to several software companies, you'll probably have quite a few games in your collection that could be transferred.

The package itself is nothing amazingly special to look at, as it's designed to do the job with a minimum of fuss. On loading the package you'll be presented with a menu of different transfer routines for the different versions of the protection system you'll come across. Obviously, if you're a beginner in the world of protection systems, this won't be much fun, but you've been fully catered for – you'll find a little database on the disc, listing hundreds of games and which options to use for each. If the game you wish to transfer isn't listed, fear not – there's also a header reader provided to find out which version of *Speedlock* you're trying to overcome, which'll happily tell you which option to use.

There's not much you can say about a transfer package, other than whether it works or not. In our office tests, we didn't find a single *Speedlocked* game that *SoftLok* couldn't tackle, and the header reader did a good job of clearing up any games that weren't listed on the database. It works, with an over 90 per cent success rate as claimed by Rob himself. By way of a validation, we didn't find a single *Speedlock* game it wouldn't transfer, which pushes the success rate up to a 100 per cent, but there're bound to be exceptions.

As for the files the package saves out to disc, you shouldn't have any problems – *SoftLok* either writes out a single 42k runable file or, if the game is a little bigger, a collection of files totalling no more than about 70k, which can be run with a separate program provided on the *SoftLok* disc.

If you desperately want a down side to balance this review, the documentation leaves a little to be desired, but the package is so easy to use, you probably won't need it anyway.

In summary, yeah – it works.

90%

Details

PRODUCT: Soft-Lok
PRICE: £8.99
AVAILABLE FROM: Campursoft, 16 Slatefield Street, Gallowgate, Glasgow, G31 1UA
☎ 041 554 4735

Home Teacher

"This software's an education," said Dave. But was he talking Oxbridge, Playschool or Grange Hill?

Knowledge is power, allegedly. So watch out when you give a kid an educational program – they'll be planning a household coup d'etat and demanding more pocket money before you know it.

But I don't think you'd be in much danger giving your five-year old *Home Teacher*. Sure they'd gain knowledge, and, consequently, power, but, hey, a pocket torch uses power, but you're not in much danger of getting overthrown by that. Nope, *Home Teacher* should get them educated enough to be useful, but not so clever they become a danger.

It's a homebrew package (ie, not professionally written) designed, in conjunction with experienced teachers, to teach four- to six-year olds the basics of maths (simple adding and subtraction), shape recognition and telling the time.

The various sections are generally well designed, and progress logically, so that children can get the hang of the concepts being covered. All the sections are split into two parts, with a teaching section and a puzzle section. Everything is clearly explained with the help of simple graphics and animation, and the fact that when the child gets an answer wrong the correct answer is clearly indicated (along with the reason why it is correct) is just what the teacher ordered.

A word of warning, though – this isn't a package you could leave a child to play on their own. Parental guidance is necessary, and the program even prompts the parent to give help occasionally.

I am worried that perhaps the package is a little mis-aimed. It all seems far too simplistic for most four-to-six year olds. Even if they are a bit slow in the education stakes and need to be taught colours at the age of five, I'm not convinced that the extremely basic graphics (the circles only just deserve the name) are going to impress them – by six most kids have seen *Sonic*, they know what computers can do. Also, there are no scores which mean that children can't see whether they're improving which takes away one form of motivation for continuing with the program.

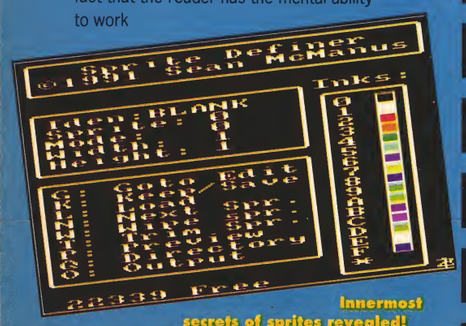
There's also an oddity in the fact that the Numbers section only teaches up to six while the Time section needs knowledge of numbers up to 12. And it asks you your name at the beginning of a session and then never calls you by your name afterwards. Hmmm...

And it's not a very large package, either. For £5.99 I would have expected more. That's more than you'd pay for a *Fun School* program, and they are undeniably larger and more attractive packages.

60%

Details

PRODUCT: Home Teacher
PRICE: £5.99 on tape and disc
AVAILABLE FROM: Pathway Software, 9 Meeting House Lane, Balsall Common, West Midlands, Nr Coventry CV7 7FX



Innermost secrets of sprites revealed!

Type-ins

How fast can you type in an AA listing without any msitakes? Simon reckons he could do all this month's in under 30 minutes. Wnat to try and beat that?

This month David Hall exposes two of his programs for the nation to laugh at. Well, we would laugh at them, but they're really quite amazing good, actually. In fact, if David doesn't mind sending any more of his stuff down from Manchester, he can do a comeback tour in a few months' time.

Helloween

Has anyone ever played the PD classic *Croco Magneto*? How about Radical's *Ball Bearing*? If you have, you'll get the general idea behind *Helloween*, in which you play a pumpkin who's lost his candles, and needs a light. So guide the pumpkin round the levels collecting the candles, but avoid the spikes, as they hurt.

```
GADJ 10·'·}}}·HELLOWEEN·{{{
LANH 20·'·directed·by·David·Hall·(c)·Oct·'92
LANF 30·'·for·Amstrad·Action·Spookzine
AALK 40·'
IAPI 50·ENV·3,1,15,5,15,-1,1:ENT·-1,4,3,2,4,-3,1
HALA 60·ENV·1,1,15,2,15,-1,34:sp=32000
IAKF 70·DIM·grid(20,22):SPEED·INK·100,15
OAPM 80·IF·PEEK(32000)=0·THEN·PRINT·"Please·Wait·...,":GOSUB·780
HAII 90·MODE·0:BORDER·0:RESTORE·1120
ACEM 100·INK·0,0:INK·1,14:INK·2,5:INK·3,2:INK·4,1:INK·5,6:INK·6,16:INK·7,15:INK·8,3,26:INK·9,26:INK·10,25:INK·11,24:INK·12,19:INK·13,18:INK·14,9:INK·15,3
JANL 110·PEN·15:PRINT·"DAVID·HALL·PRESENTS:"
KALF 120·PEN·5:LOCATE·2,2:PRINT·"H·E·L·L·O·W·E·E·N"
IAJN 130·CALL·sp,2,10,2:PRINT:le=1:sc=0
DDJG 140·PEN·6:PRINT·"It·is·Halloween·and··Percy·Pumpkin·has···had·his·supply·of····candles·stolen·····(he·needs·them·to···scare·off·horrible··ghosts·and·witches)"
EDPI 150·PEN·7:PRINT·"·Without·the·candlesPercy·will·be·unableto·keep·himself·lit·all·Halloween·night·,·thus·allowing·the·ghouls·to·take·over·the·world·......"
ECEK 160·PEN·11:PRINT·"·Help·Percy·to·grab·all·10·candles·(·)···on·all·3·levels,but·avoid·the·spikes·(·)as·these·are·fatal!"
CBLG 170·PEN·13:PRINT·"Play·using·Up·&·DownCursors·or·Joystick"
IAPD 180·CALL·sp,3,17,19:CALL·sp,4,19,21
JAHK 190·PEN·1:PRINT·"SPACE/FIRE·TO·START!";
KADE 200·IF·INKEY(47)<>0·AND·INKEY(76)<>0·THEN·200
LAGA 210·CLS:PEN·2:LOCATE·1,24:PRINT·"LEVEL:···SC:"
HAKO 220·LOCATE·1,25:PRINT·"CANDLES:";
FAJN 230·PEN·4:PRINT"·----------"
HADP 240·PEN·9:LOCATE·14,24:PRINT·sc;
KAMF 250·LOCATE·7,24:PRINT·le:ca=0:READ·lev$
IACB 260·PEN·1:LOCATE·1,23:PRINT·lev$
CACJ 270·a=1:b=1
FAPD 280·f1=0:READ·info$
HANM 290·FOR·loop=1·TO·LEN(info$)
JAPM 300·byte=VAL("&"+MID$(info$,loop,1))
KAPH 310·IF·byte)7·THEN·byte=byte-8:f1=1
NAGP 320·IF·byte=2·THEN·grid(a,b)=0:px=a:py=b:GOTO·350
NAFO 330·IF·byte=6·THEN·grid(a,b)=0:ex=a:ey=b:GOTO·350
KACO 340·grid(a,b)=byte:CALL·sp,byte,a,b
GAFA 350·a=a+1:IF·a<21·THEN·370
LAIJ 360·a=1:b=b+1:IF·b=23·THEN·x1=1:bck=0:GOTO·390
HABI 370·IF·f1=1·THEN·f1=0:GOTO·340
EAHC 380·NEXT:GOTO·280
MALA 390·tx=px:ty=py:y1=0:a=grid(px+x1,py)
OAEP 400·IF·a=1·THEN·x1=-x1:CALL·&BCA7:SOUND·4,2000,0,0,3,1,0:GOTO·420
DAOJ 410·tx=tx+x1
MALM 420·IF·(INKEY(72)=0·OR·INKEY(0)=0)·AND·py)1·THEN·y1=-1
MACN 430·IF·(INKEY(73)=0·OR·INKEY(2)=0)·AND·py<21·THEN·y1=1
GADC 440·a=grid(tx,py+y1)
GAPM 450·IF·a()1·THEN·ty=ty+y1
IAEK 460·IF·px=tx·AND·py=ty·THEN·500
LAHE 470·CALL·sp,bck,px,py:CALL·sp,2,tx,ty
KAFL 480·px=tx:py=ty:bck=grid(px,py)
IAGI 490·ON·bck·GOTO·500,500,510,570,500,600
JAHD 500·FOR·pause=1·TO·22:NEXT:GOTO·390
HAKK 510·sc=sc+10:PEN·9:LOCATE·14,24
HAPK 520·PRINT·sc:SOUND·1,50,0,0,3,1,0
GAAP 530·bck=0:grid(px,py)=0
HAJH 540·ca=ca+1:CALL·sp,3,ca+9,25
NAJF 550·IF·ca=10·THEN·grid(ex,ey)=6:CALL·sp,6,ex,ey
CAJK 560·GOTO·500
HAHM 570·SOUND·4,0,0,0,1,0,12:LOCATE·2,11
HAKL 580·PEN·9:PRINT·"G·A·M·E····O·V·E·R"
JAPG 590·FOR·pause=1·TO·6000:NEXT:GOTO·90
HAJL 600·SPEED·INK·5,5:sc=sc+le*100
FAFF 610·SOUND·4,20,500,0,1,1,0
JAKG 620·PEN·9:LOCATE·14,24:PRINT·sc;:PEN·8
JACN 630·LOCATE·3,10:PRINT·"LEVEL·COMPLETED!"
JAED 640·LOCATE·4,12:PRINT·"COWABUNGA·MAN!"
HABH 650·FOR·pause=1·TO·7000:NEXT
MAMG 660·le=le+1:IF·le<4·THEN·SPEED·INK·100,15:GOTO·210
LACJ 670·PEN·1:LOCATE·3,16:PRINT·"CONGRATULATIONS!"
LAOM 680·PEN·2:LOCATE·2,17:PRINT·"HALLOWEEN·IS·OVER!"
LAPL 690·PEN·3:LOCATE·2,18:PRINT·"...UNTIL·NEXT·YEAR"
FAHI 700·a(1)=20:a(2)=14:a(3)=2
HAND 710·a(4)=a(1):FOR·loop=1·TO·3
LAIL 720·a(loop)=a(loop+1):INK·loop,a(loop)
DADN 730·NEXT·loop
KAKI 740·IF·S@(4)<128·THEN·SOUND·4,RND*400,80,0,1,1,0
HAOA 750·FOR·pause=1·TO·30:NEXT
KAEF 760·IF·INKEY(76)<>0·AND·INKEY(47)<>0·THEN·710
GAAH 770·SPEED·INK·100,15:GOTO·90
EAMK 780·SYMBOL·AFTER·32
IANG 790·FOR·loop=HIMEM·TO·HIMEM+1000
LABM 800·POKE·loop,PEEK(loop)·AND·PEEK(loop)/2
KALJ 810·NEXT·loop:MEMORY·31999:store=sp
HAMF 820·FOR·loop1=1·TO·21:sum=0
GAGA 830·READ·code$,total
HAEB 840·FOR·loop2=1·TO·24·STEP·2
KAEG 850·value=VAL("&"+MID$(code$,loop2,2))
LAMO 860·POKE·store,value:sum=sum+value
JAHD 870·store=store+1:NEXT·loop2
HANC 880·IF·sum=total·THEN·900
KAOO 890·PRINT·"Error:line"860+loop1*10:END
GANB 900·NEXT·loop1:RETURN
HADN 910·DATA·DD4604112000211570191OFD,817
IAKF 920·DATA·E5DD460221ACBF1E041910FD,1246
IAMD 930·DATA·1E50DD46001910FDD10E08E5,1155
HALN 940·DATA·06041A77231310FAE13E0884,902
IAJF 950·DATA·670D20EFC90CCC20C04C9820,1288
HAEL 960·DATA·84CC30200C000000000984084,776
HAOM 970·DATA·4C30400CCC30044C98000000,684
HAKO 980·DATA·000015000050F8FC00F05656,1013
IAEJ 990·DATA·A8A15203A8F4F4FCA8A9A9A9,1997
HAFN 1000·DATA·A8A10303A8545656000000000,759
HAHJ 1010·DATA·000041000082410082824100,585
IACD 1020·DATA·82824100828241008 2A8FCA8,1368
HAJK 1030·DATA·A8545454000000000824100,615
IAPD 1040·DATA·82456F6F00158A9F00C70045,1007
IAEA 1050·DATA·82158A9F00456F6F00824100,934
HAMI 1060·DATA·82102030003000302030202O,466
HAEH 1070·DATA·2000000000202020100030202O,224
HAOH 1080·DATA·302010202000000000010303,167
HAAL 1090·DATA·00525252025252502025252,742
HAMK 1100·DATA·02525252025252502025252,744
HAKD 1110·DATA·02030303020000000000000,13
HAIN 1120·DATA·"NORMAN·BATES·WOZ·ERE"
IAFJ 1130·DATA·99999999991480ddd5801849 48d
JAAE 1140·DATA·dddd8849380ddddd8050419999 99
IAIB 1150·DATA·18d59130388804185019999189
IADO 1160·DATA·891098ddd58885890d50d51d888
IACO 1170·DATA·09d5802dd58806198888ddd8918
HAMM 1180·DATA·830999388494030999990381909
IALC 1190·DATA·99999904958045051d538859d81
IAHB 1200·DATA·505405018 0d9d503505105048d5
IAOF 1210·DATA·9d501d585018d59d80505105880
HAJP 1220·DATA·d958015053050188494804505 1d
FAIJ 1230·DATA·54884199999999999
HAJA 1240·DATA·"··FREDDY'S·REVENGE"
IAJI 1250·DATA·d99999999d59601810101dd9598
IABH 1260·DATA·8840480dd91c81858038d539380
IACA 1270·DATA·581010184991cc1815151885419
JAGC 1280·DATA·999915999910dd88dd58898dd0d
HAJP 1290·DATA·dd880943014151415141014918 8
HANN 1300·DATA·0dd5883801941014151410141 01
JAFB 1310·DATA·4990ddd80d585988d5888d0d984
JAHG 1320·DATA·30d5888dd90c40dd099999cc48d
IAGF 1330·DATA·9802809888591888893 18ddd540
IAAF 1340·DATA·391319189999910915948ddd580
FAEF 1350·DATA·395d99999999d
IABB 1360·DATA·"JASON·VOORHEES·LIVES"
HAGM 1370·DATA·99991001999914838410518883 9
HABN 1380·DATA·0d4801051509991059901051588
HAFP 1390·DATA·049050180105999509 0d14d1051
HAMO 1400·DATA·488d90d101010510599910141 80
HANM 1410·DATA·10515880498010d1059995090 53
IACH 1420·DATA·101599c488594598d8380dd9054
IAKM 1430·DATA·10d3d4ddd5905010159999959 3d
IAHA 1440·DATA·10251818c01019d10d105145030
HAPH 1450·DATA·109405101010518510109851801
HABI 1460·DATA·05105135109053104510510596 1
HAAM 1470·DATA·0945901010510599094501c4105
IANI 1480·DATA·10d8890d1c4105140dd31999910
DACH 1490·DATA·519999
```

Meteor Storm 3

There are some things man is not meant to do in a reader program. Probably the first and most important thing is not to put parallax scrolling and massive sprites in your game, as it's not possible. Damn – Dave's managed it. Just thing of this as an obstacle race, guiding your ship around asteroids with cursor keys.

```
KANB 10·'·"METEOR·STORM·III"·(C)·October·1990
AAJK 20·'
MAGH 30·'·a·computer·program·by·David·Hall
GAMB 40·'·for·AMSTRAD·ACTION
AAMK 50·'
KACD 60·'·"HEY!·YO·RADICAL!",said·Leonardo
KAOJ 70·'·"RIGHT·ON·DUDE!",Raphael·replied
KAJF 80·'·"Oh·shut·up·and·go·to·sleep!"
IABE 90·'·.....Mummy·Shouted
AAIN 100·'
DAPI 110·MEMORY·9999
CABE 120·INK·0,0
CAMH 130·PAPER·0
CAKC 140·MODE·0
CAME 150·INK·7,1
DAAB 160·INK·12,6,15
DAPA 170·INK·14,26,0
CAPB 180·PEN·12
HACL 190·PRINT·"Please·wait·...."
CAAM 200·BORDER·0
EAEB 210·store=16000
FAPF 220·FOR·loop1=1·TO·80
CAHH 230·sum=0
GABA 240·READ·code$,total
HAPA 250·FOR·loop2=1·TO·24·STEP·2
KAPF 260·value=VAL("&"+MID$(code$,loop2,2))
GAOH 270·POKE·store,value
FAJO 280·sum=sum+value
FAOK 290·store=store+1
DAOP 300·NEXT·loop2
HAPB 310·IF·sum=total·THEN·340
LANA 320·PRINT·"Error·in·line·";990+loop1*10
BANI 330·END
EABA 340·NEXT·loop1
FAJM 350·a$(1)="+·KeR-SpLaT·+"
GAEH 360·a$(2)="You·made·it·!"
DAKB 370·col(1)=12
DAOB 380·col(2)=14
BAOJ 390·CLS
CAJB 400·PEN·11
EAHG 410·WINDOW·15,19,2,4
GALB 420·PRINT·"SPACESTORM··3"
DAHN 430·PLOT·444,334,3
DAPE 440·DRAWR·164,0
DAMB 450·DRAWR·0,52
DAOH 460·DRAWR·-164,0
DALE 470·DRAWR·0,-52
FADK 480·FOR·loop=16·TO·294
FABA 490·MOVE·496,loop,8
DAHB 500·DRAWR·60,0
DAPM 510·NEXT·loop
EANJ 520·WINDOW·17,17,8,20
CAII 530·PAPER·8
BAAP 540·PEN·4
FAGH 550·PRINT·"····DISTANCE"
EACG 560·WINDOW·1,20,1,25
CAEI 570·PAPER·0
CAAP 580·CALL·16000
DAMF 590·LOCATE·2,17
DAPL 600·b=PEEK(40000)
DALK 610·PEN·col(b)
DANJ 620·PRINT·a$(b)
EAEL 630·WHILE·INKEY$()""
BAIO 640·WEND
EAGN 650·WHILE·INKEY$()"·"
BAKO 660·WEND
CACL 670·GOTO·390
IAIC 680·DATA·CDFF3E2114C522384A212601,1008
IADC 690·DATA·224B46AF32409C21B888061E,1013
IAJG 700·DATA·36002310FBCDB93ECD463FCD,1351
IAIH 710·DATA·CE3FCD0140CD9E40CDC0403A,1485
IAHH 720·DATA·409CFE0028E7C3A7BC3E08CD,1570
IAMD 730·DATA·1EBB201D3E01CD1EBB280B3A,872
IAGF 740·DATA·384AFE2B28043C32384AED5B,1039
HALO 750·DATA·384A21E0500 62C180A3A384A,739
IACE 760·DATA·FE0028EE3D18E8C5D5011000,1276
IADD 770·DATA·EDB0D13E0882573006EB0150,1279
IAGF 780·DATA·C009EBC110E9C921D840DD21,1646
IAHF 790·DATA·204E1600CD0B3F06B07EE6AA,1119
IAKF 800·DATA·4F1F81DD7700DD7710DD237E,1317
IACF 810·DATA·E6554F1781DD7700DD7710DD,1463
HAEN 820·DATA·2323147AFE0820081110000DD,768
IAOG 830·DATA·231D20FB10D3C9ED5F47AF3C,1413
IAKH 840·DATA·B928FB10FAC9214F46347EFE,1557
HAIK 850·DATA·04202B3600DD215046110400,558
IAEG 860·DATA·AFDDBE012804DD1918F70E50,1242
IAGF 870·DATA·CD3B3FDD7700DD3601C00E03,1152
IAIF 880·DATA·CD3B3FDD7702DD360301DD21,1202
IAJC 890·DATA·50460643C5DD66017CFE0028,1162
IAFD 900·DATA·27DD6E007EFE1020023600DD,1075
IAKF 910·DATA·7E03DD460280FEC7301BDD77,1418
IALI 920·DATA·03CDBF3FDD7401DD7500AFBE,1503
HAHL 930·DATA·2002361011040 0DD19C110C8,780
IAKD 940·DATA·C9DD360110 18F13E088467FE,1301
HANP 950·DATA·C030041150C01910F2C9214D,1127
IAKC 960·DATA·46347EFE2AC0360011F4012A,1094
IANA 970·DATA·4B462B224B467CFE00200A7D,912
IAFE 980·DATA·FE1220053E0232409CCDC0BB,1227
IAAF 990·DATA·AFCDDEBB1134002100000C3F9,1335
IAEE 1000·DATA·BB21B888347EFE2720223600,1131
IACM 1010·DATA·DD21B688AFDD23DD23DD23DD,1736
IAKH 1020·DATA·BE0120F5DD3601C00E28CD3B,1254
IABH 1030·DATA·3FDD7700DD360201DD21B988,1256
IAFK 1040·DATA·0E03AFDDBE0128 5CDD6601DD,1281
IAPG 1050·DATA·6E00DD7E02FE30380B0603CD,1042
IAIK 1060·DATA·BF3FDD7401DD7500DD7E02C6,1477
IAEI 1070·DATA·03DD7702FE30381FD630FE9A,1404
IAPI 1080·DATA·380CFEC8300F3EF9DD960247,1340
IAJA 1090·DATA·1802062F21F04D1816DD3601,751
HACO 1100·DATA·001819DD460221E04D111000,709
IANH 1110·DATA·3E3090193D20FCDD5601DD5E,1247
IAII 1120·DATA·00CDE73EDD23DD23DD23DD20,1311
IAFJ 1130·DATA·95C92A384ACD29BC2323E5CD,1460
IAJH 1140·DATA·B040E1062DCDBF3F0600C3E11,1072
IACE 1150·DATA·BE30053E0132409C2310F5C9,1073
IABL 1160·DATA·3E04CDADBCFE80D021CE40C3,1720
HAHP 1170·DATA·AABC0400000000 1C0F007D00,530
HAHM 1180·DATA·0000040E0F2800000040C0D,102
IAKB 1190·DATA·1E3C2800000C0C0E0F3C3C00,303
IACC 1200·DATA·000C0D0D1E3C3C00050C0E0F,234
IAAF 1210·DATA·0F3C3C28040E0F0F1E3C3CA8,541
IAJG 1220·DATA·0D0D0D1E2D3C7C7C0E0E0F2D,510
IAAJ 1230·DATA·1E3C3CFC0F0F0F1E3C3C7C7C,845
IAIJ 1240·DATA·1E1E1E2D3C3CBCFC2D2D2D3C,890
IABO 1250·DATA·3C3C7CFC3C3C3C3C3C3CBCFC,1296
IAHL 1260·DATA·3C3C3C3C3C7C7CFC3C3C3C3C,1040
IAEO 1270·DATA·3C3CFCFC3C3C3C3C3C7C7CFC,1424
IAPM 1280·DATA·3C3C3C3C3CBCFCFC143C3C7C,1256
JADB 1290·DATA·7C7CFCA8143CBCBCBCFCFCA8,1984
IACN 1300·DATA·007C7C7C7CFCFC0000FCFCFC,1756
IAFN 1310·DATA·FCFCFC000054FCFCFCFCA800,2016
HAIO 1320·DATA·000054FCFCA8000000000045,825
HANL 1330·DATA·880000000000459A64880000,595
HAIO 1340·DATA·00009A9A6464000000 4530CF,832
IANF 1350·DATA·CC3088000045 65CECE988800,1258
IAKP 1360·DATA·00CFCFCCCFCCCC0000CFCF98,1799
IAEL 1370·DATA·65CCCC0000CFCF9865CCCC00,1584
IAHO 1380·DATA·00CFCFCCCFCCCC000045CFCE,1715
IAIL 1390·DATA·CECC88000045CFCFCCCC8800,1573
IANG 1400·DATA·0000CFCFCCCC0000000045CF,1098
HAJL 1410·DATA·CC8800000000004588000000,545
IAGC 1420·DATA·003000CFCC00300000CF45CE,989
IAKO 1430·DATA·CE88CC0000CFCFCECECCCC00,1780
IALK 1440·DATA·00CF8ACECE44CC0000CF00CE,1442
IAGI 1450·DATA·CE00CC0000CF00CECE00CC00,1233
IAKB 1460·DATA·00CF00CFCC00CC0000000045,891
HAMH 1470·DATA·880000000000000000000000,136
```


Typing listings

If you've never typed in a listing from AA before, then reading this following blurb is a REALLY GOOD IDEA.

- Basically, all you need to do is type in exactly what we print EXCEPT the first four letters in each line.
- The first four letters are a code which work in conjunction with our unique and utterly excellent *TypeChecker* program below.
- Only press RETURN when you get to the end of a command line. If a command line goes on to two lines do not press RETURN at the break in the line. Your lines on screen should break in exactly the same place as they do in the mag.

TypeChecker

This is a program that enables you to check whether you have typed AA listings in correctly. Type it in, then SAVE it for future use. So, when you want to type in an AA listing, and you want to double check that you got it right:

- Load up *TypeChecker*.
- Type NEW.
- Type in the listing of your choice.
- When you've finished type LIST.
- At the end of every line a highlighted code will appear. It should correspond with the code printed in front of the same line in AA. If it doesn't you have typed in that line incorrectly.

```
PAML 10·'·TypeChecker·V1.0·-·By·Simon·Forrester··-·Dec·1992
MAOJ 20·'·For·Amstrad·Action·-·Public·Domain
DANK 30·MEMORY·&9FFF
CAJK 40·csum=0
GAME 50·FOR·addr=&A000·TO·&A05B
DAKJ 60·READ·byte$
GAJB 70·byte=VAL("&"+byte$)
FACF 80·POKE·addr,byte
GAFB 90·csum=csum+byte
DALK 100·NEXT·addr
OACI 110·IF·csum()&2ADD·THEN·PRINT·"Checksum·Error":END
LAHE 115·POKE·&A001,PEEK·(&BB5B):POKE·&A002,PEEK·(&BB5C)
KAHI 120·POKE·&BB5A,&C3:POKE·&BB5B,&3:POKE·&BB5C,&A0
MACN 130·PRINT·"TypeChecker·V1.0·Installed":END
MABC 140·DATA·CF,FE,93,FE,0A,CA,00,A0,F5,C5,D5,E5,FE,0D,CA,22
LACJ 150·DATA·A0,5F,16,00,2A,5A,A0,19,22,5A,A0,E1,D1,C1,F1,C3
LAFJ 160·DATA·00,A0,3E,20,CD,00,A0,3E,18,CD,00,A0,2A,5A,A0,7C
LADI 170·DATA·CD,45,A0,7D,CD,45,A0,3E,18,CD,00,A0,21,00,00,22
LACN 180·DATA·5A,A0,C3,1B,A0,F5,E6,0F,C6,41,CD,00,A0,F1,E6,F0
KAJC 190·DATA·1F,1F,1F,1F,C6,41,CD,00,A0,C9,00,00,END
```

Turning *TypeChecker* off (it is automatically initialised when you RUN the program above) and back on again is quite simple:

POKE &BB5B,0 To turn it off
POKE &BB5B,3 To turn it back on again

TypeChecker was an *Amstrad Action* presentation brought to you in association with Hairy Happening Productions Ltd.

Public Image

When it comes to the stars, you ask Patrick Moore. When it comes to plants, you ask David Bellamy. When it comes to *Blake's Seven*, you ask a psychiatrist. When it comes to Public Domain software, you ask Keith Woods.

Cubulux 2

By Dominique Liard

People involved in the CPC PD scene are really quiet, thinking types, you know. Don't listen to all the talk about drink, fornication and wild, wild parties that you read about in demos – it's all just a front. No, there's nothing a scener likes better than to spend hours on end straining the old grey matter, with the aid of his trusty CPC and a decent puzzle game. And, as if to prove this point, here's yet another puzzler from the French coder and fanzine editor, Dominique Liard.

So what's this one then? Is it a puzzle game? Surely not...

Cubulux's concept is refreshingly easy to get to grips with, which is no bad thing, as all the instructions for it are in French. All you have to do is match up blocks of the same colour to make them disappear. Simple.

Er, no, actually. The game might begin that way, but you'll soon find that you can't move blocks around the playing area, you can only swap their positions. Half the screen is always blank, and it's impossible to move any of the blocks onto a blank spot. So if you inadvertently destroy some blocks in the middle of a line, you'll usually find that you've completely separated two matching blocks, and you'll have to start again.

A high score table – d'you mean that many people play this?

Clever level design means that it's difficult to prevent this problem, so you'll need to give careful consideration to every move. But, you're constantly being hurried along by an imposing time limit. This gives the gameplay a nice balance, as it forces you to take risks.

Overall, it's not a bad little puzzler. It will keep you happy for a while, at least until the next in the unstoppable flow of puzzle games is released.

80%

Well, would you credit it? It's a PD puzzle game. That makes a change...

Forcefield

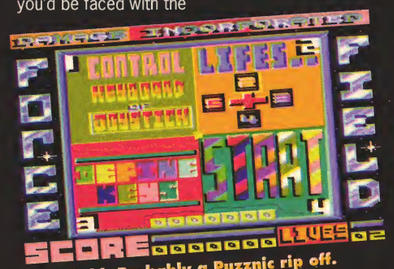
By David Hall

Cruising along in your spaceship on your way home to Earth – after a long mission in a far off galaxy – you take your eyes off the windscreen for just a minute and fumble around beside your seat for another tape. You always knew that this stupid habit was bound to get you into trouble some day, but never in your wildest dreams did you think that when you looked back up again, you'd be faced with the most feared obstacle known to space travellers – the mythological Forcefield of Death.

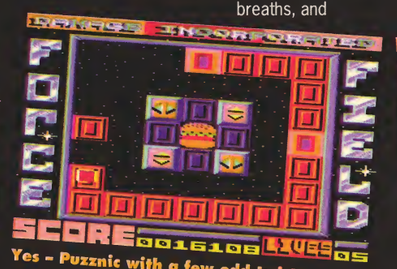
You panic. No-one has ever encountered the Forcefield and lived to tell the tale, and you don't fancy your chances of being the first, especially since you've only got five bombs left on board. At least, though, they're of the particularly endurable bouncing variety; as the 100 layers of the forcefield are made up of many different squares, each of which have to be destroyed separately.

You gather yourself together, take a few deep breaths, and launch your first bomb. Using your special controller, you guide its movements as it bounces quickly from one square to another, destroying each one it touches. Once you've started the process, you have no opportunity to slow it down, so with sweat rolling down your forehead, you concentrate on your formidable task.

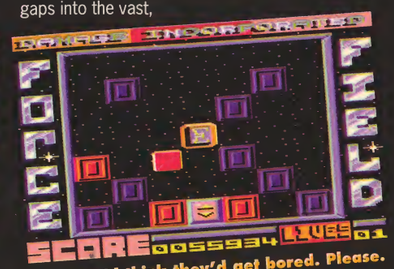
Your biggest problem is the gaps left in the forcefield from the many unsuccessful attempts to destroy it. You can't afford to let any of your five valuable bombs disappear through these gaps into the vast,



Forcefield. Probably a Puzznic rip off.



Yes – Puzznic with a few odd twists.



You'd think they'd get bored. Please.

Tut's Pyramid

By Phil Coombs

Tut, son of Tsk, defender of Bejeesus, on his mum's rug.

The pyramids of ancient Egypt are one of the seven wonders of the world. But how were these huge structures erected in a time without cars or cranes, spirit levels or builder's bum?

Apparently, if Phil Coombs is to be believed, they were slapped together by a little blokey called Mohamed. But how did just one man transport all those heavy rocks?

On his magic flying carpet, of course! That's not to say that Mohamed's task was an easy one. No, Mohamed took his art seriously and like any good artist, he had to have the best of materials. He needed to find six fine, big, stone building blocks with which to build his pyramid, on foundations that were already laid in the Valley of the Kings. He needed to do it quickly too, as the old Pharaoh was knocking at death's door, and if Mohamed wanted to remain in the land of the living, he had to fulfil the terms of his contract – which said that the pyramid had to be finished in time for the Pharaoh's passing.

Unfortunately, the 53-screen world which Mohamed inhabited was also home to all manner of nasties bent on making his life difficult, some of which were to prove impossible to avoid. His path was also blocked by many doors, which required certain objects to open them. Often poor old Mohamed had difficulty in making sense of the association between certain doors and objects, but then maybe he was just getting too old for this game. Perhaps it was his advanced years that also accounted for the alarming rate at which he dehydrated in the desert sun, causing him to drop in on some energy-replenishing oases at regular intervals.

In the end, Mohamed found his task an impossible one. He also found it tiresome and repetitive, which gave him little encouragement to try harder. So it probably wasn't Mohamed that built the great pyramid of King Tut after all. Or was it? If I were you, I'd leave the mystery intact. Trying to find out isn't worth the effort.

Anti-Multiface

By Merlin J Bond of Magicsoft

What this program does is, as the title suggests, get around the need to have your multiface plugged in when you're reloading material saved with the multiface.

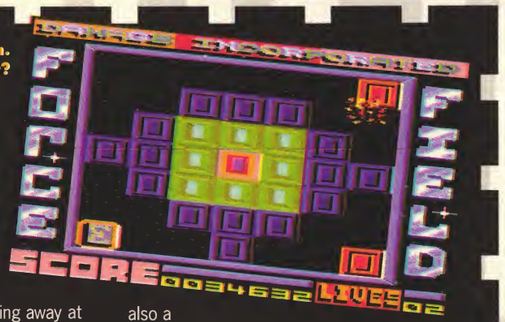
It does this by creating a new file for loading the data into memory. It works perfectly, up to a point. That point is 64k, as it won't work with anything that was saved in 128k format.

This program is most useful for people who've bought a high capacity drive without a side-switch and would like to transfer all their old tape games to disc, as the standard multiface files don't work with many such drives. For them, it's an absolute must.

80%

Real live action pics, oh yes they are...

This'll be a puzzle then. Who's churning 'em out?



empty masses of space. But all too quickly, you find that such wastage becomes inevitable (*sounds like a metaphor for modern life – Dave*).

Just a few layers into the forcefield and you start to get really desperate. You've only just begun, but you can already see your chance of survival slipping away at an alarming rate. Brief glimmers of hope appear in the form of extra bombs and squares that slow your bombs down to a more manageable pace ('Holy Moses' as opposed to 'fwaaargh'). You also notice that one part of the myth about the disastrous consequences of dropping bombs off the edge of the forcefield no longer seems to hold true. But the odds remain stacked against you – because there are also a few booby-trapped squares, and devices which speed your bombs up or confuse your controls.

As you watch your very last, precious life slip away with the last of your bombs disappearing slowly into the distance, you remark dryly to yourself that you can easily see why no-one has ever managed to break the forcefield's 100 layers. Indeed, you'd be surprised if anyone managed more than 10. C'est la mort.

65%

Fraggle MOPS up

Fraggle of MOPS is a name that should be familiar to you, as he is the man responsible for many of the Public Domain's most popular games, among them *Puzznix*, *Jumpmania* and *Crazy Snake*. A 21-year-old German, Fraggle lists his non-CPC hobbies as playing badminton, mountain biking and listening to music. So what have he and MOPS been getting up to recently? We decided to find out...

When was MOPS formed, and why?

MOPS was formed a short time after 1993's Cebit Party (*in Hanover – Dave*). The idea came from GWM and Face Hugger. We decided that it would be best if it wasn't as big as groups like BENG!, and that the members should live reasonably near to each other. Everybody tried to think of a name, and Jaysoft came up with MOving PixelS, which we all liked. There was no major reason for forming the group, it was really just for fun!

Do you ever find it difficult to come up with new game concepts?

No, not really. Most of my game concepts are borrowed. The idea for *Atomic* was taken from a 16-bit game, *Atomino*; *Logistic* from *Popcorn*; and *Puzznix* from *Puzznic* – a game still available for the CPC. The reason I coded *Puzznix* was because I ordered a copy of *Puzznic*, but never received it – so I decided to code a version of my own.

Which of your own games would you say is your best?

My best game? They are all a little bit lame! (*Come on, don't be so modest! – Keith.*) Okay, okay, I think *Jumpmania* is my best game technically, *Puzznix* has the best game concept and *Crazy Snake* has the greatest playability (despite the fact that it took me the least time to code – just two weeks).

What productions have you and MOPS got in the pipeline?

Well, our next release will be the *MOPS-Demo*. In the last few months I have learnt Assembler, which I used to code my first two demo parts. The demo will also include parts from Face Hugger, Jaysoft, Ablaze and MOD.

Do you think that you will ever leave the CPC?

I'm sorry to say it, but yes, in the next few months I intend buying an Archimedes. However, I think I'll still do things on the CPC too, as I love this computer.

The Examiner

Oo-er, missus, the adventure column goes X-certificate as Debby Howard takes a peep at a game that gets the euphemisms flowing. Don't say you haven't been warned.

CENSORED

The Eunuch's Ball

REVIEW

Price: £2 on tape or £4 on disc.
Available from: The Adventure Workshop, 36 Grasmere Road, Royton, Oldham Lancashire, OL2 6SR.
Crossed Cheques/Postal Orders payable to: PM Reynolds.

WARNING: This game is for adults only and should not be bought by anyone who is easily offended.

One fine, summer's morning, you wake up to find a letter from your Uncle Edan. Opening it, you quickly read the contents. It tells you that something important has been stolen from Uncle Edan's place, and it is your task to find and retrieve that item. He dare not even identify the object by name; but you will know it when you recover it. Since you have been promised rewards beyond your wildest dreams if your recover it, you quickly set off.

This is a GACed text-only game written by Phill Ramsay. It has previously been released by Dragonsoft (c), or at least a variation on it has; the Dragonsoft game was by the same author, but apart from the same scenario, the game are completely different.

This version is quite large for a GACed game with approximately 87 different locations to explore. That's certainly enough for you to be kept busy on a few rainy days.

It is quite rude in some places, so don't order it you get offended by by all that sex stuff, but if you don't mind a bit of *Confessions*–style bawdiness you'll probably enjoy matching up the objects to the puzzles.

You will have to go looking for some objects, so don't expect an easy time. Examine everything will help you find what you are looking for especially if you find yourself in a field. I could find only one location from where you couldn't return so (here's a hint) save your position before you leave the altar.

It's worth the asking price, if you're not a beginner. If you are, then be prepared to ask for lots of help.

89%

Where to go

If you're looking for new and re-released adventures, drop these people a line (enclosing an SAE) for their latest stock lists.

Adventure Workshop, 36 Grasmere Road, Royton, Oldham, Lancashire, OL2 6SR.

Amstrad Adventure Solution Service, 10 Overton Road, Abbey Wood, London, SE2.

WoW Software, 78 Radipole Lane, Weymouth, Dorset. DT4 9RS.

Cluepot

Continuing from last month, here are a few more hints for Five On A Treasure Island, courtesy of Stephen Bosco.

Five On A Treasure Island

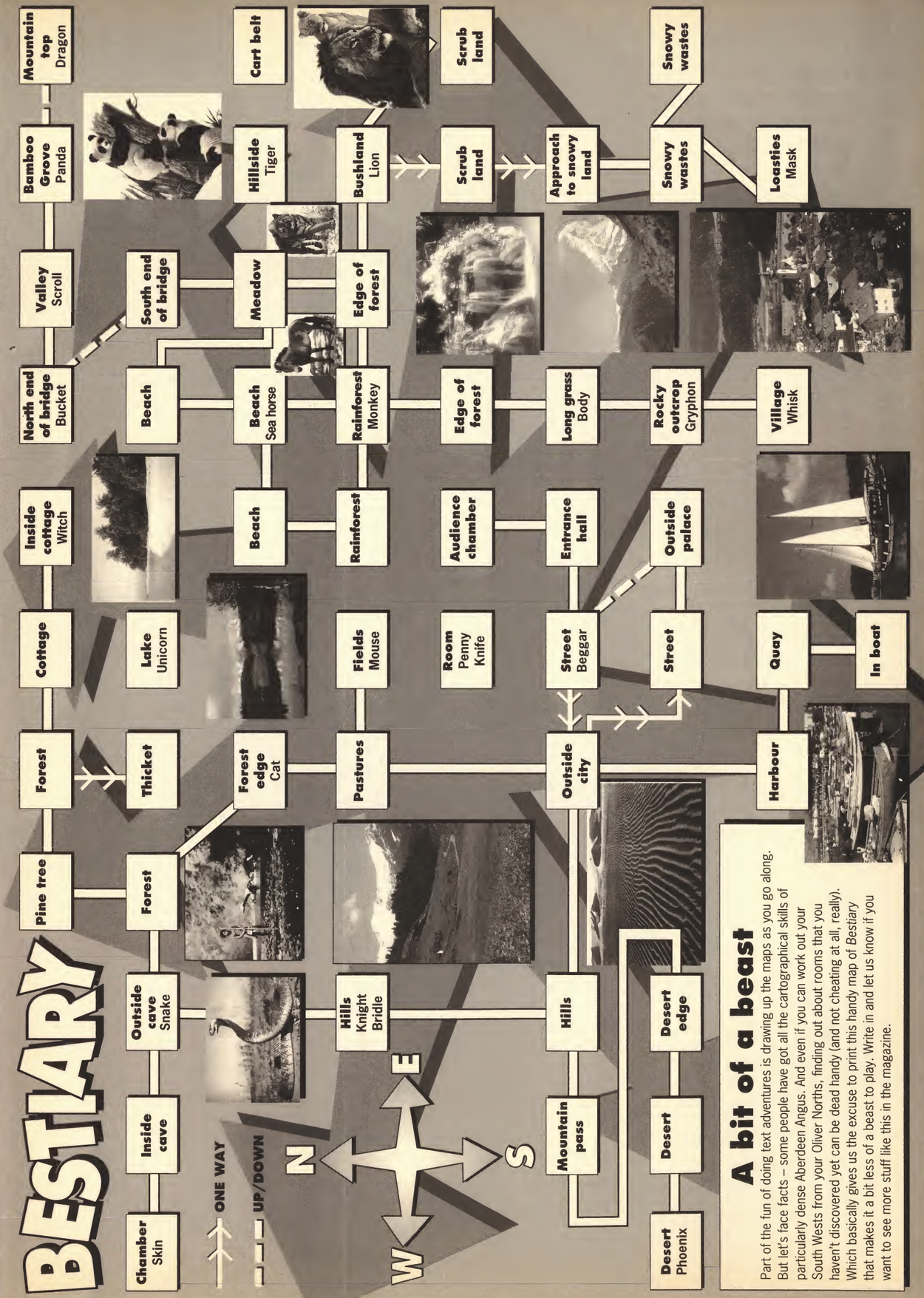
17 Get spade, ignore onion.
18 Go back to Julian and company.
19 Go north, west, north. Ignore the dark and just type GET TORCH then go south.
20 East, up, then go to the spare room and examine the bed, get matches.
21 Go to the aunt and uncle's bedroom and get the batteries.
22 Go down.
23 Go to uncle Quentin's study and out through the french windows; you can examine and read the books if you want.
24 Go to the shed and get the rope.
25 Go out of the cottage and then go south to the beach.
26 When you get to the fisherman's place, Alf will be waiting.
27 Talk to Alf and he will get Timmy.
28 Become George and enter the boat.
29 Row boat until you get to Kirren Island.
30 Pull boat up to the top.
31 Go to middle of the island.
32 Eat cake then get crumbs.
To be continued...

Lords & Ladies of Adventure

If you're stuck on one of the games listed below, the person listed next to it will be willing to give you a hand (because they've already completed it, y'see). If you write to them please remember to enclose an SAE with your enquiry and DON'T ask for a full solution, as you'll probably be disappointed. If you want to become a Lord or Lady please write in with a list of the games you've completes

- Most Amstrad Adventures – The legendary Joan Pancott ☎ (0305) 784155 from 1pm to 10pm.
- *Adult 2, Boredom, Can I Cheat Death?, Doomlords 1-3, Dungeon, Escape, Firestone, Jason & The Argonauts, River, Spacy, Tizpan, Welladay* – Stuart Mainland, 2 Douglas Road, Coylton, Ayr, KA6 6JJ.
- *Avon, Forest At World's End, Hollywood Hyjinx, Kobyashi Naru, Mordon's Quest, Scapeghost* – Angela Allum, 22 Point Royal, Bracknell, RG12 7HH.
- *Knightmare, Kobyashi Naru, Rebel Planet, Who's Afraid Of The Balrog?* – Ross Younger, 3 Cammo Parkway, Edinburgh, EH4 8EP.

Here are some Ladies – we're not too sure what's happened to the Lords.



A bit of a beast

Part of the fun of doing text adventures is drawing up the maps as you go along. But let's face facts – some people have got all the cartographical skills of particularly dense Aberdeen Angus. And even if you can work out your South Wests from your Oliver Norths, finding out about rooms that you haven't discovered yet can be dead handy (and not cheating at all, really). Which basically gives us the excuse to print this handy map of *Bestiary* that makes it a bit less of a beast to play. Write in and let us know if you want to see more stuff like this in the magazine.

Q. What's large, hairy, difficult to understand, and lurks scarily around the AA offices every month? A. Richard Fairhurst's Techy Forum column (we lied about the hairy bit).

Techy Forum

I've lost my key

Is there any way to bypass the 'Press any key' bit when you want to load a program from tape? I want to create a loader program (with picture), then load the main program from this without having to press the key to start the tape again (I'm using BASIC).
R Hotchkiss, Telford

Simple: you put an exclamation mark at the start of the program name. So, instead of RUN"GAME", you would use RUN"!GAME". **Richard**

That's motoring

I have recently bought *Klax*, *Seymour Goes To Hollywood* and your *Exolon* covertape for my 464 Plus. The problem is that after the program has loaded, the cassette motor keeps running, only stopping at the end of the tape. This does not seem to affect the running of the latter two games, but in *Klax*, every time a tile falls off the conveyor, the solenoid for the cassette motor clicks on and off repeatedly. I have returned the tapes and the replacements have been exactly the same.

Do you think this is a software fault, or perhaps a fault in my computer (most tapes load okay on every attempt), or are these tapes incompatible with the Plus? Is there any kind of POKE – Multiface or otherwise – that will switch off the solenoid, and will it damage my computer to run a game with the solenoid constantly "on"?
Colin Waldron, Glasgow

There's nothing wrong with leaving the cassette motor on during a game; it won't hurt your Plus at all. It could be a Plus incompatibility problem, but it's not one to worry about. The *Klax* problem is more worrying. It might be an intriguing use of the motor as a sound effect generator, but it sounds more like a far less interesting case of Plus incompatibility (the design of the chip used to turn the tape motor on and off is one of the more significant differences between the CPC and the Plus machines).

It's not a good idea to let the motor click on and off like this. It could overheat, leaving you with a nasty repair bill. You could give up on *Klax* altogether (*don't – it's too wonderful a game to ever stop playing, and I wish a plague on Richard for ever suggesting you should do such a horrible thing – Simon*), or ask a friendly electronic repairman to modify the connection to the motor relay so that it stays on permanently (they could even wire in a handy little switch for you to operate). **Richard**

They're way too small.

Serial: part 1

Is it possible to transfer files from the Psion to the 6128 and vice versa?
Alan Robinson, Brough

The Psion isn't actually PC compatible, but it can be connected to one using the universal standard for linking computers, RS232 (as in the *Spitting Image* song of the same name). This basically means that you can link two computers with a cable which allows you to send data from one to the other. Most PCs have an RS232 interface built in. The CPC doesn't, but you can buy one from Siren Software (£29.99, 061 724 7572) or Avatar (£39.95, 0274 602180).

The one thing you will need to check is that the Psion can send its word processor files in ASCII format – which simply means pure text, with no embellishments such as bold and italics. Its default is to send RTF (Rich Text Format), which is a standard used in the PC and Macintosh world for transferring files with such information intact; unfortunately, no CPC programs support it. Check your manual before you splash out on a serial interface, though – you don't want to waste your money. **Richard**

Top Tips

Arc-tipster

1 If you want to do a JP (BC) or a JP (DE), just use the stack: type in PUSH BC: RET for BC and PUSH DE: RET for DE.

2 A quick way to clear the screen is to disable interrupts, re-align the stack pointer to &0000, and keep pushing zeros to the stack. Don't forget to re-align the stack pointer and to enable interrupts afterwards.

3 Don't use SET b,A, but instead OR n, in which n contains the bits to be set. Similarly, don't use RES b,A, use AND n, in which n is the complement of the byte which contains the bits to be set.

4 To find the value of the program counter (PC register), type CALL findpc, which is this very simple subroutine:

```
findpc: pop hl:jp (hl)
```

5 For those of you who want an arcsine and an arccosine function to go with the BASIC arctangent function, they are:

```
10 DEF FNasn(sine)=ATN(sine/SQR(1-sine*sine))
20 DEF FNacs(cosine)=ATN(SQR(1-cosine*
cosine)/cosine)
```

Adrian Lybaek, Canada

Free transfer

Do other readers realise that any games which load in blocks can be transferred to disc using the *JL-Copy* program (covertape 22 from AA88)? Did you know that it is possible to load a binary file of no more than 22k into *Devpac*? I have found it very useful for finding Multiface pokes.

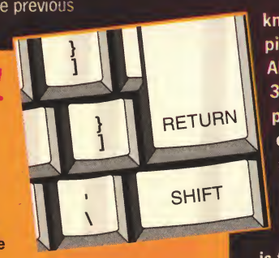
Also, I am able to offer help with some BASIC problems, so I would be most grateful if you could print my address.
Carl Thomas, 3 Monmouth Way, Barry, South Glamorgan CF62 9AE

RSX of the month

This month's entry for your toolbox is a simple command called |PUTKEY. It harnesses a feature of the Amstrad which you can't normally access from BASIC – the ability to pretend that you've pressed a key (you can only use it once before you read a key again, mind you).

```
10 MEMORY &9FFF
20 FOR n=&A000 TO &A026
30 READ a$: POKE n,VAL("&"+a$)
40 NEXT n: CALL &A000
50 DATA 21,09,A0,01,0D,A0,C3,D1
60 DATA BC,00,00,00,00,12,A0,C3
70 DATA 19,A0,50,55,54,4B,45,D9
80 DATA 00,DD,6E,00,DD,66,01,23
90 DATA 5E,23,56,1A,C3,0C,BB
```

I found this very useful recently while writing a database. I tested for keys being pressed with INKEY$ (CTRL-S to save, CTRL-L to load, that sort of thing), and if the key was a character between A and Z, the program had to jump straight into the field editing mode, as this was the character to be put in the field.



It's a bit of keyboard, yes.

Problem: the A-Z key had already been read, and so the consequent INPUT command wouldn't pick it up. Solution: use this command to pretend the key had been pressed again. The syntax is elementary; if a$ contains the character you want to put back, use |PUTKEY,@a$. Enjoy.

By the way, if you've got any toolbox routines, you can send them along to *Forum* or, if they'd be of value to those learning assembly, you could send them to Assembly Line.

Forum

Serial: part 2

1 I was very pleased to see *Mastercalc* on the covertape. But when I load it in from disc (it was transferred using the tape-to-disc utility supplied), I get the message, 'Is the serial interface to be used?' Is this my computer playing up, or is it something I am doing?

2 I recently purchased a second-hand Protek modem. Is there any way of connecting it to the Siren Software serial interface I also own?

3 Can you recommend a good (and fairly cheap) modem, as the Protek cannot be used for auto-dialling?

4 How far apart can I put computers when connected by an RS232 interface? I have been told it is about three metres.
Gary Firth, Halifax

1 When the disc version of *Mastercalc* loads, the first thing it does is set up all the ROMs connected to your system; *Protext*, *Utopia* and any disc operating system fitted, for example. There's a ROM inside your serial interface, and during its set-up process, it asks you whether you will want to use its full set of facilities, hence the prompt. Reply N, because you don't need serial interface facilities from within a spreadsheet (if the program doesn't work, try disconnecting your serial interface).

2 It depends on what sort of connector the Protek has. Theoretically, it should be RS232 of some kind (see the previous letter), but the connector may vary. It will probably be a 25-pin (count them!) D-plug; in other words, the top is slightly wider than the bottom (or vice versa). If this is the case, you need a standard RS232 computer to modem cable, which your local computer shop should be able to supply.

3 Cheap in modem terms means around £80. Check out *Micro Mart* and the big fat PC magazines for adverts; it's well worth it, because the money you spend on a fast (2400 baud) modem will be saved in terms of the shorter time you have to spend connected.

4 That's about right, yes. Much more and you might start having problems. **Richard**

A question of questions

I'm writing a multiple-choice question and answer program to help with a 'rules test' that I have to endure at work.

I have made the program pick the questions at random, but the trouble is that sometimes it picks the same questions three or four times. I thought my prayers had been answered when I bought AA98, as I noticed a letter in Techy Forum entitled *$64,000 Question* that seemed to mirror my own problem. Not being a very experienced or knowledgeable programmer, though, I was completely stumped by the gaps in lines 210 and 220:

```
210 IF a$(a)=? THEN 200
220 n$=a$(a): a$(a)=?
```

Please could you fill the gaps for me? I know they're for when a blank string is picked, but I don't understand how it works. Also, I would like to eventually have about 300 questions, and, on running the program, I would like it to pick 40 questions at random. Is there a way of scrambling the questions so that they are not always in the same order?

Is there any way I could go back to the questions I got wrong when the quiz is finished, so that I can look them up? I realise I am probably asking the impossible, but any help would be deeply appreciated.
Chris Efthimiou, Milton Keynes

The gaps in lines 210 and 220 are meant to be empty strings. The program has to first of all read the questions into an array (a$), and then pick a question number at random (a). Once it's read the question, it blanks it out from the array, by changing it to a blank – this is what a$(a)="" does. In future, if it tries to pick this question again, line 210 will notice that it's a blank, and go back to pick another one.

Picking 40 out of 300 questions is easy. Just read 300 questions into the array a$ (probably from DATA statements), and then pick 40 random questions out of it using a loop such as:

```
500 FOR n=1 TO 40
510 a=INT(RND*300)+1
520 ...deal with the question here
990 NEXT n
```

You'll probably want to put in the piece of BASIC that avoids repeated questions at around line 520.

To jumble up the multiple-choice answers, just swap random answers around a couple of times. If there are four choices – r$(1) to r$(4) – this will do the trick:

```
600 FOR n=1 TO 10
610 a=INT(RND*4)+1: b=INT(RND*4)+1
620 i$=r$(a): r$(a)=r$(b): r$(b)=i$
630 NEXT
```

If you're working like this, you'll need to store the correct answer as a string first of all, not a number, because which number goes with which string will get mixed up when you shuffle the questions around.

Finally, the best way to remember which questions you got wrong would be to define an array – call it wrong$ – and, every time you make a mistake, get the program to put the question in the array. You can then go back at the end and, on the basis of this array, print out all the questions which you got wrong. Here's how you could do it:

```
100 incorrect=0 "No wrong answers so far"
700 incorrect=incorrect+1 "One more wrong
answer
710 wrong$(incorrect)=n$ "Store the
question
1000 PRINT "You got these questions
wrong:"
```

Up the creek? Then we've got the paddle

If your CPC's got you in a technical jam or a programming pickle, Techy Forum is here to help you out. Send your questions or tips to: Technical Forum, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW. You know it makes sense.

```
1010 FOR n=1 TO incorrect
1020 PRINT wrong$(n)
1030 NEXT n
```

Hope this helps! **Richard**

As seen on screen

1 How do I store the hexadecimal bytes of a certain section of the screen memory in BASIC DATA statements, so that I can load tand save them with disc?

2 How do I create graphics such as sprites in machine code? If I used a sprite designer to create the sprites, how would I use them in machine code (the sprite designer is written by me in BASIC)?

3 If I want to write an art package, how do I clear the cursor?

2 How do I do the following in machine code?

a Store more than one number or value in the accumulator?

b Load a file from tape or disc, like they do in multi-load games?

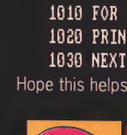
c Check inputs from the joystick or the keyboard, and if there were no inputs, get the program to move onto the next command?

d Operate five radio-controlled servo motors? The power will come from a power supply, and they are connected to the computer via an umbilical cord.

e Make vector graphics?

5 Do you know of a machine code overscan loader for use in BASIC programs?

Kevin Long, Cumbria



1 First of all, let's check that you understand how screen memory works. The top-most pixel line of the screen is stored in 80 bytes, from &C000. The next one down starts at &C800, and the progression then goes &D000, &D800, &E000, &E800, &F000, &F800, &C050, &C850... and so on. Things change when the screen is scrolled, but we won't worry about that.

So, for question one, first of all you need to find the screen address of each line that you want to save. Store this in the variable 'a'. You'll also need a variable cline, to store the current line of the program you're writing; start at 1000, say, and add 10 after each line. You can then output a DATA line of b bytes to an open file using the following:

```
200 PRINT#9, STR$(cline); " DATA ";
210 FOR n=1 TO b
220 PRINT#9,"&";HEX$(PEEK(a+n-1));
230 IF n<b THEN PRINT#9,","; ELSE
PRINT#9
240 NEXT n
250 cline=cline+10
```

2 The basic principle of a sprite is that you read bytes from an area in memory and write them to the appropriate screen address. I could waste space by explaining exactly how to code a sprite routine, but instead I'll just refer you to Simon's recent article on exactly this subject in *AA*101.

3 There's a special graphics mode known as XOR mode. This has the huge advantage that if you draw an object on the screen, drawing it again in the same place will erase it. To enter XOR mode, PRINT CHR$(23);CHR$(1); to turn it off, PRINT CHR$(23);CHR$(0);.

4a You can't. The accumulator can only hold one number at a time. If you need to store more numbers than this, put them in a variables area somewhere in your program.

4b You need to open a file before you can do anything with it in machine code. To open a file for loading, load B with the length of the filename, HL with its address and DE with the address of a 2k area of memory that you won't mind getting messed up – the computer needs it to store data between getting it from the disc drive and you asking for it. Then CALL &BC77. Opening files for saving is the same, but you should CALL &BC8C instead.

You can then read a byte in one at a time using CALL &BC80 (the byte is returned in the accumulator), or write the value A using CALL &BC95. If there's a problem with this (eg, the end of the file was reached), carry is false on return. Alternatively, if you load HL with an address, CALL &BC83 loads the whole file into memory from that address (the equivalent for saving memory is &BC98; HL must contain the start address, DE the length of the area in bytes, BC an entry address – this isn't essential – and A the file type, usually 2 for binary). Note that you can't mix &BC80 and &BC83, or &BC95 and &BC98.

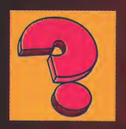
Finally, to close the file, use CALL &BC7A for an input file (loading) or &BC8F for an output file.

4c More firmware calls – CALL &BB09 scans the keyboard to see if a key is pressed. If one is, carry is true and its ASCII value is in the accumulator. If not, carry is false, so you can skip to a bit of the program using jp nc,label. If you use CALL &BB06, the computer waits around until a key is pressed, and then returns its value in the accumulator.

4d It depends how they've been connected to the computer. If you're using an input/output port connected to the expansion port, it should have come with appropriate instructions. If you're using the printer port, you can send the character in A to the port using CALL &BD31.

4e Vector graphics are horribly difficult and complicated, and require oodles of programming skill and probably at least A-level Maths. Stick to something simpler until you're a more experienced programmer.

5 There's one available, called *Overscan* (imaginatively enough), from a PD library near you. **Richard**



Upgrading again

I am thinking of upgrading my 464 Plus and would like to ask:

1 Does a 64k RAM pack enlarge the range of software available?

2 Is it more advisable to buy a 3-inch or 3.5-inch disc drive, and can you recommend one?

3 Can you recommend a cheap printer?

4 What does a 40025 upgrade ROM do?

5 Do you need a Wave Widget to connect these to my Plus machine?

Stuart Neill, Belfast

1 Yes – you can then run a wider range of games, and many more serious packages. Remember, you don't need a RAM pack for a 464 Plus, as it can be upgraded internally; we published a project recently to do exactly what you want (*AA90 – back issues plugging Ed*), or you can send your computer to Avatar or BTL for them to do it for you if you're a bit nervy about opening up your machine.

2 It depends what you want to do. Commercial games and many utilities are only available on 3-inch disc, but 3.5-inch discs are cheaper and you can get PD on them just as easily. It might be best to buy 3-inch first and then save for a second 3.5-inch drive.

3 We've always liked the Star LC series – the current cheap incarnation is the LC-20 – but the Citizen ABC is a good new printer.

4 It's for CPC 464 owners, so that their machine has all the extra commands of a 6128. The 464 Plus does anyway, so you don't need one.

5 You'd need one for a RAM pack, but not for anything else. **Richard**

Covertape queries

1 With issue 96 you gave away a program called *Screen Designer* on the covertape. When you save your picture and load it in again, it stops after it loads in. Is there any way to keep loading and run another program after it?

2 With issue 92 you gave away *BooTracker*. There is a fileon the tape called QUICK.BOO. When you try to load it into *BooTracker* it does nothing. Why is it there and what does it do?

David Cash, County Antrim

1 You need to write a short loader program to do this. Say that you want to load a picture called SCREEN from the tape and then run the next program, called GAME:

```
10 MODE 1
20 LOAD "!SCREEN",&C000
30 RUN "!GAME"
```

2 QUICK.BOO is a collection of instruments which you can use in your own tunes, to save you the hassle of designing them yourself. It doesn't actually play a tune or anything like that. **Richard**

A new kind of loading problem.

Packing more muscle than Arnie, Samus is the heroine of Nintendo's latest smash hit, *Super Metroid*. If you want to see the exclusive report on this red-hot title, you'll have to buy Total! Simple enough for you?

Britain's biggest selling independent Nintendo magazine is on sale Thursday April 14th

TOTAL!

SEGA POWER

ON SALE THURSDAY 5TH MAY

EXCLUSIVE! BUBSY 2

The platform hero with cattitude is back! Check out this first look at his latest and greatest romp.

This is *The New Breed* and you can read all about it only in this month's *Sega Power*.

EXCLUSIVE REVIEW

THE BEST SPORTS LICENCE EVER!

WorldCupUSA94

Plus: *Sensible Soccer CD* exclusive review!

18 PAGES OF TIPS

Virtua Racing

REVIEW-PACKED ISSUE!

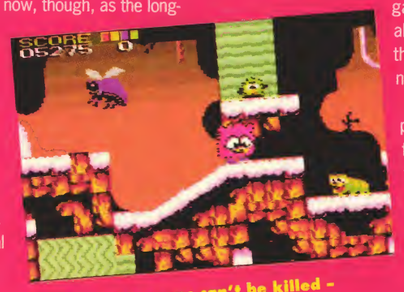
Pete Sampras Tennis
Streets Of Rage 3
Marko's Magic Footy
Tomcat Alley
Jungle Book
Columns 3

Fluff

So, is it the platform game to end all platform games? At last Simon Forrester can give you the definitive answer...

Okay, we admit it. We were hedging our bets last month in the preview. We wanted to say we liked the game, but we went out of our way to nit-pick, just in case what Radical finally produced didn't live up to the promise of the preview version of the game we saw. All that's behind us now, though, as the long-awaited *Fluff* comes under the reviewer's hammer over the next two pages.

The game is all about a pink ball of fluff called, funnily enough, Fluff, who's trying to rescue her four children. It's a Plus-only, horizontal scroller, and it's been billed (by the author) as having the best gameplay ever on the CPC. It's here things get difficult for *Fluff*. If a game is going for a title like, 'best gameplay ever', it'd be wise to steer clear of such extensively explored genres such as the platform game. Still, there hasn't been a perfect platform game yet (though *Prehistorik* came close), so it's still in with a chance.



The big blue wasps can't be killed – spinning just stops Fluff getting hurt.

The power of the press

In last month's preview, Clur, Dave and I all had a chance to comment on what we thought of the game so far. Dave was, in his own words, churlish. I really have no idea what 'churlish' means, so I'll summarise; he decided that though the gameplay gets bogged down occasionally with programming techniques, this is only what the consoles have been doing for years, so that's okay.

Clur recognised an obvious potential in the game, but still worried about a few elements that might get on her nerves when playing it.

I personally (being a picky little sod) had a few reservations about the movement of *Fluff*, and the smoothness of some of the animations. The sequel to the fabulous *Elite*, namely *Frontier*, (available on the PC and Amiga right now) is suffering the same problem – its gameplay goes deeper than any other game ever, but it was presented about as well as the Brit Awards. I then went into the realms of propeller head comments, and picked on the programming. I feel sort of guilty for this really, as apparently Rob Buckley then went and reprogrammed a largish chunk of the game. Has it done him any good?

When you first pick up the joystick and start playing, you'll notice immediately the attention to detail. Whereas many other platformers would have been content to let you wander past the same type of graphics throughout the entire game, each of *Fluff*'s levels has a distinct, unique feel to it. In the classic platform game style, there's an icy level, an industrial metallic zone and all the other clichéd zones, but we can't hold that against it – you're no more slippy on ice than you are on metal, so it's nothing to knock marks off (or put marks on) for – they're just graphics to liven up the levels a bit.

New improved Fluff

Fluff herself handles quite well (there aren't many times you can get away with saying 'she handles quite well', but I've managed well so far). As opposed to the preview version we saw, the new improved Fluff is fairly heavy, and doesn't have the reluctance to get up to speed that she used to – she's still got inertia, but it complements the game instead of getting in the way.

The bad guys are all very straightforward, usually moving in a set pattern within a predefined area, so they're fairly easy to kill, using Fluff's spinning abilities to mash up even the hardest of pterodactyls.

So Fluff journeys through 12 scary, hostile levels, rescuing her four kiddies who repetitively run off at the start of each one. Level one should have been a quest for a playpen, and level two should have rewarded her with a padlock. We wouldn't need to play through the other 10. Of course, such technology isn't available to our pink fluffy thing, and so she's destined to roam 10 more dangerous, torturous levels, rescuing her kids.

The levels aren't all the same, though – there are the distinctive differences; some have

The Pink One gets thrown about by a set of springs as she tries to get to the rail.

This begs the question, "what the hell am I supposed to do now, then?" somewhat.

She's made it – it's one of her kiddies, and he looks pleased to see his mum.

teleports, while others automatically scroll whether you like it or not. But they all have the basic elements of *Fluff* – platforms, kiddies and lots of decent, old-fashioned gameplay. Breaking the mould of most games for the CPC, *Fluff* is actually incredibly good fun. It's not faithful to any arcade original, a poor second to a 16-bit version, or a classic game dragged from the mists of time. It's a platform game, and it's fun. That's all.

It's incredibly lush to look at – everything is beautifully drawn, the scrolling's smooth, the animation is wonderful (and Rob Buckley claims it'll be even better by the time it goes on sale), and things move too fast rather than too slowly.

Acid sounds

One part of the game that's been added since we last saw it (other than ten of the levels) is the sound. There are no individual sound effects for either *Fluff* or the bad guys, but there is a running theme of sorts; it owes more to industrial-acid-jazz than to normal musical form, but it's a decent enough tune that thumps away in the background.

One of the problems with the preview version was speed – the game either ran too fast to cope with, or too slow to tolerate. The final version has definitely overcome this problem. There's no slow-down when the screen gets cluttered, and there's no long, boring wait for your little pink valkyrie to get up to speed.

The level are ingeniously designed – there are secret passages in abundance on later levels, along with conveyor belts, lakes with secrets in their depths and all manner of other goodies which I won't spoil by telling you about. One reason for making each level so different is to give the player a sense that they're getting somewhere; disguising the same objects in different graphical guises isn't going to cut it. *Fluff* doesn't even try to pull a fast one – every level has some distinguishing features.

The wait is over

My kingdom for a verdict. There are a few reasons why I'm loathe to give *Fluff* higher than, ooh – 90 per cent. First, there's a slight problem with the difficulty curve, because the second level sticks out as being too tricky, considering that level three is easier by far. And there are no real original ideas in the game – everthing's been done before, admittedly not as well, but there's no real hook or gimmick to the game other than its speed and superb graphics. Perhaps some power-ups that gave *Fluff* some special powers would have given the game that extra spark of personality.

And it's a shame the game's Plus only, but that's one of the reasons it's so damned good; if the game had been written to run on all machines, it wouldn't run as fast or as well – it's Plus only, disc only and better off that way.

So *Fluff* is an impressive piece of coding that undeniably shows off the Plus at its best in technical terms, and as a game it's certainly hugely enjoyable. But there's still room for better platformer, I reckon. **Simon**

If you want well-drawn graphics, take a look at that tree. Craftsmanship, that is.

New material

When programmers start going into the realms of pink balls of fluff, it has to mean that they're getting short of material to write games about. If anyone's thinking of writing a platform game, they might like to consider a few of the following:

- ***Sam Spade*, the environmental game – "I really dig the earth, man"**
- ***Colander*, in which the player has to wash vegetables within a certain time limit, the penalty being having to wash the damned thing afterwards (*sounds like you speak from bitter experience – Dave*).**
- ***Mad Woman With Dog*, in which you, playing the dog, have to jump on someone and tear their throat out with your teeth within the allotted time limit, that being the time it takes for the woman saying, "he just wants to play, you know".**
- ***Pro Tourist Sim*, in which you have to guide your character through the crowded levels of a beautiful, historic city, stopping at exactly the right moment to make the people behind you panic, try to avoid bumping into you, and fall out into the road.**

VERDICT

FLUFF ■ RADICAL SOFTWARE
081 856 8402 ■ £TBA

GRAPHICS 95%
It looks incredibly impressive – great artwork, superb animation.

SONICS 65%
No sound effects but a relatively thumping theme tune.

GRAB FACTOR 85%
Doesn't so much grab you as push your face through the monitor...

STAYING POWER 90%
...And the odds are you won't pull it out again too soon.

RATING 90%

Amstrad Olympics

On your marks, get set, go! Leo Rouane sorts out the healthy specimens from the physical wrecks in an A-Z of the some of the best and worst CPC sport simulations.

3D Pool (Domark)

First class pool sim with all the rules and features of the real thing The game is unique in that you don't control a cue of any kind; instead, you manoeuvre the table to the line that you wish the ball to take. Once you have grasped the gameplay however, you are confronted with an excellent game made even better by its budget price. **80%**

4 Most Super Sports (Alternative)

Possibly the worst compilation of any sort ever with two bad games (*Cricket International*, *Championship Sprint*), one of the worst games ever on any format in any parallel dimension (*Kentucky Racing*) and one that doesn't load at all (*US Basket Master*). Avoid like *Noel's House Party*. **25%**

California Games (Kixx)

Fun, fun, fun in the sun, sun, sun goes the song and this game has plenty of both. Take part in four events (foot bagging, surfing, roller skating and BMX freestyle) and try to earn loadsa points. Some of the events are wickedly hard so don't expect to pick it up straight away. Good value, though, as each event is a game in itself. **67%**

Chase HQ (Ocean)

Maniac Porsche driving antics here, in what has to be the most graphically stunning and playable driving game ever on the CPC. Coupled with the novel feature of ramming the baddies into surrender, this one will certainly have you burning the midnight oil. **90%**

Continental Circus (Mastertronic)

Now this is (even) more like it. Drive your Formula 1 racing car around eight different tracks around the world, whilst trying to keep your car up with the rest in order to qualify. Excellent graphics but the gameplay is what makes this one really shine. Number one for driving fans. **92%**

Daley Thompson's Decathalon (Ocean)

This one was one of the first to appear of its kind on the CPC, and in its day, it kicked butt. You have to control Daley in all 10 of the Decathalon events (pole vaulting, swimming, javelin, running at various distances, something with weights and, er, some other things) and apart from the control method – waggling the joystick until you either give yourself a hernia or the joystick breaks – it was, and still is, a good jaunt. **74%**

Hard Drivin' (Domark)

Sports car frolics abound as you do your best to loop the loop and avoid crashing in this stunt track game with Freescape graphics. The whole thing is very playable although the graphics look a bit dull at times. **75%**

Harricana (Loriciel)

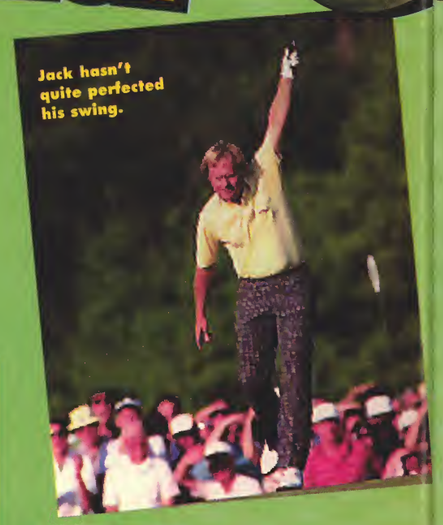
Take control of a snow-bike in a race against time set in the snowy wastes of the Arctic. The bike is very easy to control, and there's a great feeling of speed. All in all, a good one for the collection. **73%**

International 3D Tennis (Palace)

Amazingly real tennis sim where the players look like a pile of triangles, but don't let that put you off. All the usual tennis features are here, but a kind of 'aftertouch' helps you to dip the ball away from your opponent at inopportune moments. Worth every penny. **81%**

Italia '90 (Virgin)

Side-view soccer that pushes *Italy 1990* close for the top spot of side view footie games. Average graphics but half-decent gameplay make this a must for any fan of this kind of game. **81%**

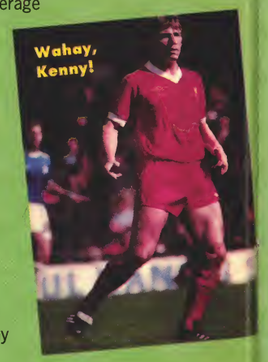


Jack Nicklaus Golf (Accolade)

Easily the best golf sim around today, it offers great graphics and gameplay, and the in-game controls are a pleasure to use. Definitely one for the connoisseur. **89%**

Janaghir Khan Squash (Gremlin)

Slowish rendition of the closed court classic with average graphics, average sound and average gameplay. Average really.
Yawn. **70%**



Kenny Dalglish Soccer Match (Impressions)

Oh, dear. Oh, dearie me. *KDSM* is a side-view affair where you get the chance to play as the red team (Liverpool) or as the blue team (user definable). The game never impresses as the players on both sides are near identical colours (quite a feat when they play in different coloured shirts but believe me it's true), and coupled with the awful Spectrum-style graphics, this one is to missed at all costs. **33%**

Italy 1990 (Super Sim Pack)

Most soccer pundits viewed this as the ultimate soccer game of all time, but does it cut it with the best of them now? Why, golly hatstands it certainly does, and what's more, for a game that's four years old, nothing has ever really come close to it. Hair-raising overhead/side view action which is made even more enjoyable by the excellent graphics and smooth scrolling. Not to be missed, and a bargain on this particular compilation. **89%**

Kick Off (Anco)

An overhead soccer game that seemed to be the bees knees at the time, but fortunately, many better games have appeared since then. Still very fast, though, and one to pick up if you find it on a compilation. **78%**

Kick Off 2 (Anco)

Anco decided to put all of the glitches in KO1's graphics right in *Kick Off 2*, and the improvement really shows. Incredibly fast overhead action improves to near-frantic in two-player mode. Definitely one of the better football sims around. **86%**

Lineker Collection (Kixx)

This is a collection of four games, three being proper 'footie' games and the other being a pointless joystick-waggling, sit-up and press-up training session. Apart from that, the games are pretty good with *Lineker's Hot Shot* being the bargain of this overhead-view footie pack. **73%**

Gary Lineker – proving that all top sportsmen are really, really dull.

Manchester United Europe (Krisalis)

'Ooh ah, Cantona, ooh ah, Cantona,' goes the chant for the non-Man Utd supporters among us, and its definitely an, 'ooh ah' for *Man Utd Europe* with its excellent overhead graphics and slick gameplay. You get the chance to play in any of the competitions in Europe currently operating, and this adds a lot more variety to an already brilliant game. Shame about the treble, though. **73%**

Triple failures – hah!

Lotus Esprit Turbo (Gremlin)

Excellent action in one-player mode, but the game comes into its own with the amazing split-screen two-player option. Battle it out with a mate or an imaginary friend in the ultimate competitive racing game on the CPC at the moment. Amazing stuff. **93%**

Mega Sports (Kixx)

This compilation consists of *Summer Games*, *Summer Games 2*, *The Games – Summer Edition*, *The Games – Winter Edition* and *Winter Games*. All of these contain accurate renditions of all the events in the summer and winter Olympics. On the whole the games are quite good but prepare for more than one or two horrors among them. For sheer quantity, you can't fault this. **63%**

Mountain Bike 500 (CodeMasters)

Mountain Bike 500 aims to cash in on the craze of the 90s and fails spectacularly. One-colour, Spectrum-style graphics and a horrendous control method destines this game to holding up rickety tables everywhere. **43%**

Passing Shot (Encore)

Whilst playing as well as *Pro Tennis* or *International 3D Tennis*, you tend to feel let down somewhat by the awful Spectrum graphics in this game. The gameplay doesn't suffer, though, and that's what really counts. All the usual tennis stuff present, though, making this a not all bad offering. **86%**

Pro Tennis Tour (Ubi Soft)

Brilliant graphics make this one of the better tennis sims available. Perhaps not as playable as *International 3D Tennis*, but this one feels a whole lot more realistic to play. Good one for the would be Lendls and Beckers among you. **72%**

Quattro Power (Codemasters)

Value-packed action once again as the Codies team up *Twin Turbo V8* (very good scrolling racer), *Pro Powerboat Sim* (good beat-the-clock-and baddies racer), *ATV Sim* (reviewed elsewhere) and *Moto X* (good motorbike scroller – can anybody get past the first obstacle?) on yet another four-game pack. As with all the *Quattro* packs, value for money abounds. You won't be disappointed here. **81%**

Quattro Racers (Codemasters)

Another super value pack featuring *BMX 2 Sim* (BMX obstacle racing), *Championship Jet Ski*

Medal winners

And now we come to awards time folks, and after a photo finish, here are the results...

Gold Medal
Italy 1990 – **This one was no competition really. If you don't already have it, what are you playing at?.**
Silver Medal
International 3D Tennis – **You'll need time to get to grips with this one but persevere, we promise you, it's well worth the effort.**
Bronze Medal
Jack Nicklaus Golf – **Brilliant, innovative, addictive. Get it, now.**

Losers

Worst of the worst time now, so please no letters saying that these are the best sport games ever, okay...?

Wooden Spoon
Trevor Brooking WCG – **Footy management at its worst with nothing to distinguish this from a BASIC program. Dire.**
Cardboard Spoon
Mountain Bike 500 – **Absolutely hopeless gameplay and graphics make this award well deserved.**
Toilet Roll Spoon
Kenny Dalglish SM – **Nothing at all worthy of discussion here. Bin it. Then burn it. Then stab it. Then eat it. Just never, ever play it. Ever.**

(water circuit racing), *ATV Simulator* (dirt bike stunt racing) and *BMX Freestyle* (BMX racing again). All of these are quite playable, although none really shine. **67%**

Quattro Skills (Codemasters)

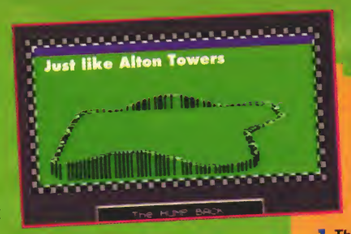
Yet another ingeniously-named pack of four games containing *Pro Skateboard Sim* (average ride around the course game with the exciting twist that you're on a skateboard), *International Rugby Sim* (quite good rendition of the sport, if not a bit hard to control), *11-A-Side Soccer Sim* (slow-moving overhead jobbie, with more rules than you can shake a stick at) and *Pro Tennis Sim* (easy to pick up, but unfortunately, even easier to put down). As usual, for the budget price, who cares about one bad game? **78%**

Quattro Sports (Codemasters)

Grand Prix Sim, *Pro Ski Sim*, *Pro Snooker Sim* and *BMX Sim* are all included on this excellent value-for-money pack. None of the games are outstanding, but all warrant an average rating of 70 per cent. Give it a whirl. **70%**

RBI 2 Baseball (Hit Squad)

A quite simply stunning baseball sim that strangely seems to be the sequel to a game that never existed. Even if you don't think you like baseball, or sports sims, check this one out. **90%**



amount of time it takes the crane to get you back on course after you've fallen off, but it's a top game nonetheless and should be a part of the collection of any self-respecting speed freak among you. **96%**

Supertrux Publisher (Elite)

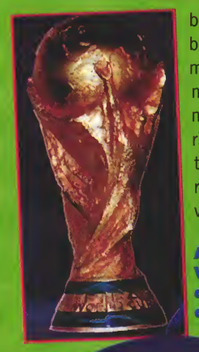
'Breaker Breaker, one niner, there's a bear on your tail,' is one of the things that you might think better of saying out loud while playing this game. You take control of a juggernaut and you have to dodge, ram and outspeed all manner of obstacles and other computer cars in order to reach the end of the race. Detailed backdrops help the gameplay, and the control of the juggernaut is superb. One to look out for. **63%**

Toyota Celica GT (Gremlin)

This game gives you an inside the cockpit view, with a decent 'hands-on-wheel' steering system that adds a bit of realism to an otherwise poor game. The handling is atrocious and you'll find yourselves, more often than not, taking a trip down the embankment. Don't bother. **79%**

Trevor Brooking's World Cup Glory (Challenge)

Excruciating, extremely boring text-only (it sounds bad already, doesn't it?) management game with no redeeming features to mention. So I won't. A right load of old tat. Even text adventure fans rightly loathe it with vehemence. **40%**



Ah, who wants a World Cup anyway? We've already got one.

World Wildlife fund?

Rad Ramp Racer (Mastertronic)

Take control of either a skateboard or a BMX and use your chosen implement to hurtle over a series of jumps and ramps to try and secure points. The more showy the jump, the better the points. It also features a split-screen two-player mode that enhances the gameplay. Decent graphics and sound bring this game to a slightly-better-than-average-but-not-so-much-as-you'd-notice-unless-you-were-conducting-scientific-bench-tests rating. **58%**

Skate Wars (Ubi Soft)

Ice hockey fans are well-catered for here in this futuristic sim. All the features of the real game (punching, fighting, blatant fouls) are present and the graphics are just as good. One to get. **80%**

Stunt Car Racer (Microstyle)

A wild rollercoaster trip in a sand buggy around a nightmare stunt course. The innovative 3D graphics make this game shine out from the rest. Control is excellent and the races are well contested, while not being too hard to complete. There's a slight niggle with the

10 sports sims the world is waiting for...

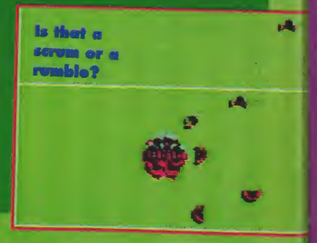
1 *The Highland Games*
2 *Jack Charlton's Fly Fishing*
3 *Curling*
4 *The Graham Taylor Football Mis-Management Sim.*
5 *The Pro Coronation Street Dominoes Simulator* (from CodeMasters, natch)
6 *Synchronised swimming*
7 *Comeback – the Official Frank Bruno Boxing Sim (in which all the opponents are overweight and incredibly easy to beat)*
8 *The Take That Shooting Gallery*
9 *International Barebacked Camel Racing*
10 *Nigel Mansell's World Championship*

World Class Leaderboard (Epyx)

Excellent gameplay makes up for the pretty poor graphics in this offering. The game is very easy to get into, and it also has a host of playing styles to test your expertise. Could do with more than just four courses, though. **76%**

World Class Rugby (Audiogenic)

WCR is one heck of a playable game. All the rules of the oddly-shaped balls club are included, and the playing speed of the game can only be likened to *Kick Off 2* on acid. Some may find the rules and whatnot a bit daunting, but if you persevere with it, a whole lot of fun will entail. **87%**



Wacky Darts (Codemasters)

Like all computer dart games, this one features a floating hand that is always on the move across the board. Your job is to stop the hand in the right place so that it throws the dart where you want it to go (treble 20 usually until you get to the doubles). This game varies on *Jocky Wilson* in that it has various funny comic interludes. Good value because it's available on the *Quattro Fantastic* pack. **85%**

WWF (Ocean)

Another fine conversion here with its massive sprites and ultra slick animation. Get to fight (or be) Hulk Hogan, British Bulldog or the Ultimate Warrior. A lot of moves are available, and it doesn't take long to master the more important ones. The game gets infinitely better in two-player mode with the action getting a bit too physical in places. **90%**

CHEAT MODE

It's outlasted Bros. It's outlasted Sinclair C5s. It's even outlasted *Eldorado*. Yes, It's been here since issue one and it shows no sign of bottling out yet – Cheat Mode the world's premier CPC tips and pokes service. Lee Rouane is your host.

CHUCKIE EGG 2

Always glad to be of service, your beloved *AA* once again helps out a gamer in distress. Arthur Scott of Ince in Wigan wrote in with a heart-rending plea for any pokes for that age-old platformer, *Chuckie Egg 2*. He goes on to suggest that this is perhaps one game that has beaten the poking minds of *AA* over the years.

Well, fear no more, Arthur, you can now have as many lives as you want with this poke dedicated to you.

```
HAOB 100 'Chuckie Egg 2 Cheat
IABG 110 'Written By Lee Rouane
GAEM 120 'For Arthur Scott
IAPC 130 'Pick & Choose Version
AAMN 140 '
IACK 150 DATA 21,1F,BF,11,00,01,CD,11,BF,3E,FF
IAPJ 160 DATA 32,C2,67,CD,C0,85,06,0D,D5,CD,77
IAPO 170 DATA BC,E1,CD,83,BC,CD,7A,BC,C9,43,48
IAAD 180 DATA 55,43,4B,49,45,20,45,47,47,20,32
IAED 190 DATA 20,43,48,55,43,4B,49,45,20,45,47
IAMB 200 DATA 47,20,32,20,28,4C,43,52,20,46,45
IAPA 210 DATA 42,20,39,34,29,20,20,39,34,29,20
CAPM 220 DATA LCR
EAFF 230 chk=0:x=&BF00
JAPE 240 READ a$:IF a$="LCR" THEN 270 ELSE 250
GABD 250 a=VAL("&"+a$):POKE x,a
HAJN 260 x=x+1:chk=chk+a:GOTO 240
HAJI 270 IF chk()&1A5D THEN GOTO 350
FAPM 280 CALL &BC02:MODE 1:CLS
DACL 290 addr=&BF0A
KAIL 300 INPUT"Num Of Lives (MAX 255) ?",liv
IACC 310 IF liv<0 OR liv>255 THEN 300
FAJG 320 num$=HEX$(liv,2)
HAJA 330 POKE addr,VAL("&"+num$)
DABA 340 CALL &BF00
KANN 350 PRINT "Data Error Old Bean...":END
```

Multiface Poke

67C2,xx xx=Num Of Lives

OLLIE AND LISSA

All you Ollie & Lissa fans can now rejoice, thanks to David Cash from Larne in County Antrim. If you find that the levels in this game are just too hard, then follow David's advice by holding down the keys Z and SHIFT whilst playing the game, to skip a level.

David also informs us that if you find yourself missing an earlier level, then holding the keys X, C, U, B, N, U, < and SHIFT will enable you to decrease levels. Cheers for those David, keep 'em coming lad.

LORDS OF CHAOS

We've got a real treat now for all those *Lords Of Chaos* fans out there, and judging by the massive amount of letters we receive every month about this game, there are hundreds and hundreds of you.

What better to tickle your fancy than an excellent, comprehensive wizard designer, courtesy of David Hood. Let's all give David a round of applause for the work that has gone into this little lot...

```
BBDD 5 'This wonderful Lords of Chaos Wizard
     designer
OAML 6 'was written by David Hood (Disc versi
     on)
BAIP 10 MODE 2
EALH 20 DIM spell$(46)
CAML 30 GOSUB 180
CAMO 40 GOSUB 1430
JANA 50 mana=&4000:level=&4001:ap=&402F
IACL 60 stam=&4031:con=&4032:com=&4033
FAPP 70 defen=&4034:mr=&4035
BAPP 80 MODE 2
EACJ 90 PRINT "E - Edit"
EALN 100 PRINT "L - Load"
EACP 110 PRINT "S - Save"
CAAE 120 PRINT
FAJM 130 INPUT "Choose";a$
GAPC 140 IF a$="e" THEN GOTO 440
GAHD 150 IF a$="l" THEN GOTO 260
GAAE 160 IF a$="s" THEN GOTO 360
CAFK 170 GOTO 130
DANN 180 MEMORY &3FFF
FALG 190 DATA 21,00,80,0e,C1,16
GAFE 200 DATA 01,1e,00,df,0d,bf
FAJC 210 DATA c9,3c,c0,07,00
FAAH 220 FOR x=&BF00 TO &BF10
GABP 230 READ a$:POKE x,VAL("&"+a$)
BAFP 240 NEXT
CAHJ 250 RETURN
BAPP 260 'LOAD
BALJ 270 CLS
DAEC 280 GOSUB 1450
HAIG 290 INPUT "Number";track
FAPK 300 track=track+19
DANO 310 POKE &BF0D,&3C
FAJF 320 POKE &BF06,track
```

Marauder

Stepping up on the rostrum now is the lovely Chris Parker from Edgefield in Norfolk, with what he describes as a 'great cheat' for Hewson's *Marauder*.

Chris suggests that at the beginning of the game you should go up to the flashing light and get as close to it as you can.

When the light is green, shoot it to reveal an extra life. Repeat this on each light and then kill yourself at the next baddie.

Repeat the whole sequence again for as many lives as you could possibly want.

UN SQUADRON

Here we go with an all-purpose playing guide for that graphically-stunning blast-'em-up, *UN Squadron*. R (Rambo?, Raspberry?) Hotchkiss of Woodside in Telford reveals all...

Level 1: rating – easy

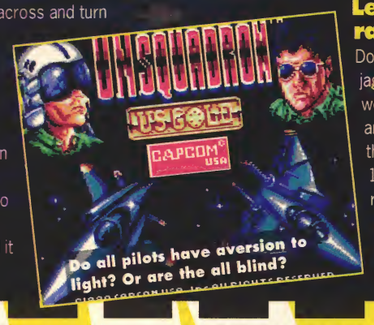
Even beginners will find this level quite simple. Blast everything that moves. The tanks and small launchers only need cannon fire, but beware of attack from above, and helicopters – they blend into the scenery well. Use your special weapon on the launcher at the end. Shoot the missile turret and not the vehicle it's attached to. The main weapons are missiles and the homing rocket. Shoot the rocket and avoid the missiles.

Level 2: rating – quite easy

As on the first level, shoot anything that moves, but beware of aircraft that come from behind you. Keep left and centre. The four green bombers before the stealth can be shot with homing missiles, but cannon fire does the job just as well. The stealth bomber, however, can't be shot with homing missiles, as the mission briefing tells you before you start. The missiles home in on the small decoys that the bomber trails behind. The trick is to start firing before it even appears. The last green bomber appears at the bottom, then you know that the stealth bomber willl be arriving at the top. So wait right at the top almost out of sight and keep your cannon blasting. The bomber will fly right into the stream of fire. Guide your cannon fire with the bomber and it will blow up. If it fires, take evasive action. The missiles can trap you in a scatter of decoys which also sap your energy.

Level 3: rating – tricky

Keep low and keep firing. Watch out for mines if you're high up, as they're can't be destroyed. And watch out for the blue planes coming from behind – they fire loads of bullets and have no mercy. Use any special weapons, and when the second set of mines come on, the fortress isn't far away. Just pop up and start firing every last weapon you've got. The turrets aren't a big threat, but keep on nailing them with your special weapon until they blow. You can go right across and turn around – don't panic, though, as you just going in for another sweep. Two sweeps is usually enough. Hint: use your special weapon when two or more turrets have scrolled into view, then release the weapon in streams until it decides to destruct.



Level 4: rating – very tricky

This level will make short work of you if you don't watch your tail. Enemies sneak up behind and their bullets flow like water. Use special weapons (bombs if possible) on the big choppers that drop in on the scene from the right. They take three or four bombs before they explode. They can be shot with continuous fire, but the bombs do the job faster. Watch out for small launchers and helicopters because they blend into the scenery. When the enemies stop coming, get to the top left and wait for the blue land launcher to appear, then go to work with the bombs. You'll see flashing red squares that indicate a hit – aim for these. The big gun is the most important, as when this blows up, the whole kit'n'boodle goes KABLOOEY.

Level 5: rating – difficult

Don't go too low because the jagged rocks will make short work of you. Shoot everything and watch out for attacks from the rear. If possible buy the 16-way gun, it takes care of all rear attacks. The tall mountains can be shot and destroyed. The big planes that come up from the bottom of the screen are tricky because they fly low and attacking them from behind is risky. The 16-way gun is useful here, either that or Greg Bates and his faithful A-10. The big helicopter-like bomber is easy to destroy providing you steer clear of its bullets. Ignore the bit in the briefing about the fighter it's carrying – it never appears.

Level 6: rating – extremely difficult

Rear attacks, vertical attacks and attacks from above are common. When the blue planes come from the bottom by the rocks, drop a couple of bombs and fire your cannons at 'em. The launchers are the most deadly in this level as they fire when you come past the rocks leaving you imited room to dodge. When the main cave splits into three take the the top or bottom route. If you choose the middle, watch out for rear attacks. Keep firing and destroying until the caves form into one again. Two missile grids need bombing, then it's on to the launcher (as in level four).

Level 7: rating – difficult

If possible buy homing missiles and a shield. Use the homing weapons on the ground targets and shoot everything on screen. When the B-52's flock in use homing missiles. Watch out for blue planes. After the streams of B-52s, the big bomber arrives. If you choose to use the homing missile then get right behind it, as it's equipped with a missile jammer which cause your homers to fly right across the screen otherwise. The two Mirage fighters escorting the bomber aren't a major threat as they have no weapons.

Level 8: rating – difficult

The three boats fire missiles and when you're already surrounded by blue fighters it's almost impossible to get out without losing energy. After constant attack from the air a big surprise is waiting. Drop six bombs on it and watch it blow. The battleship, however, needs more attention. Bomb the guns and everything that flashes red. After the first two guns keep the cannon on the ship to blow it up.

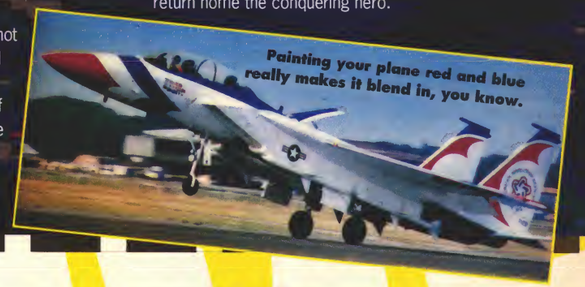
Level 9: rating – hard

If you have enough money, buy Big Boys. The things on the rails need four Big Boy bombs before they destruct. If you don't kill them quickly they'll fire deadly missiles. When the mines appear, keep low but not too low. Shoot the launchers and bomb the train launcher. The big gun at the end is a problem but if you leave your plane between the missiles' firing line you'll be able to shoot undisturbed until the whole thing blows up.

Level 10: rating – difficultish

Time to do battle with the flying fortress. First, shoot the top-most engine then the scroll will take you up and right along the back of the aircraft. Two huge guns fire at you but your special weapon will be enough to destroy them. Further right small launchers fire at you; they take some destroying. At the front of the fortress more guns and launchers are hidden in some tight places so use your cannon on these. Beneath the plane flying left, a small and a large gun fire at you. The smaller one is difficult to hit but the larger one destructs when the special weapon is fired.

When you're coming underneath the plane on your way back to where you started, fly to your left otherwise you'll be crushed. Finally, blow up the remaining launchers and engines, and then the last battle is against the centre circle thingie that fires at you with missiles. This is not a problem if you have a special weapon left, in which case you return home the conquering hero.



```
      CALL &BB18:GOTO 50
BAMJ  460 CLS
DACN  470 CLEAR INPUT
GAKO  480 PRINT "C - Character"
FABO  490 PRINT "S - Spells"
EACP  500 PRINT "E - Exit"
CADG  510 PRINT
FAMM  520 INPUT "Choose";a$
GACA  530 IF a$="e" THEN GOTO 80
GAGD  540 IF a$="c" THEN GOTO 580
GAAH  550 IF a$="s" THEN GOTO 1050
CALK  560 GOTO 520
DAAH  570 'CHARACTER
BAPJ  580 CLS
EAGO  590 PRINT "1. Mana";
FAGH  600 PRINT PEEK(mana)
FALF  610 PRINT "2. Level";
FADP  620 PRINT PEEK(level)
IABI  630 PRINT "3. Action points";
EAOK  640 PRINT PEEK(ap)
GAGD  650 PRINT "4. Stamina";
FAEJ  660 PRINT PEEK(stam)
IAPH  670 PRINT "5. Constitution";
FABC  680 PRINT PEEK(con)
FAFM  690 PRINT "6. Combat";
FAJB  700 PRINT PEEK(com)
GADB  710 PRINT "7. Defence";
FAON  720 PRINT PEEK(defen)
KALG  730 PRINT "8. Magical resistance";
EANL  740 PRINT PEEK(mr)
EAOM  750 PRINT "9. Exit"
CAKE  760 PRINT
FAAL  770 INPUT "Choose";b
JAPN  780 ON b GOSUB 810,840,870,900,930,960,990,1020
EAAF  790 IF b=9 THEN 460
CAOK  800 GOTO 580
GAMC  810 INPUT "Mana (1-250)";a
EADD  820 POKE mana,a
CALJ  830 RETURN
GAGE  840 INPUT "Level (1-3)";a
EABL  850 POKE level,a
CAOJ  860 RETURN
IAKG  870 INPUT "Action points";a
DANG  880 POKE ap,a
CABK  890 RETURN
GAGB  900 INPUT "Stamina";a
EALE  910 POKE stam,a
CALJ  920 RETURN
IAPF  930 INPUT "Constitution";a
DAJN  940 POKE con,a
CAOJ  950 RETURN
FAFK  960 INPUT "Combat";a
DALN  970 POKE com,a
CABK  980 RETURN
FAMP  990 INPUT "Defence";a
EAPL 1000 POKE defen,a
CACM 1010 RETURN
KACH 1020 INPUT "Magical resistance";a
DAPJ 1030 POKE mr,a
CAFM 1040 RETURN
CAAO 1050 'SPELLS
BAJM 1060 CLS
CAPH 1070 n=&4002
BAIL 1080 a=1
DABF 1090 LOCATE 1,2
FAPB 1100 PRINT "E - Exit"
DAJE 1110 LOCATE 1,1
GAFP 1120 PRINT "..........."
DALE 1130 LOCATE 1,1
FAEM 1140 PRINT spell$(a);
DAMG 1150 d=PEEK(n)
FAKC 1160 IF d=&88 THEN x=8
FAIC 1170 IF d=&77 THEN x=7
FAGC 1180 IF d=&66 THEN x=6
FAEC 1190 IF d=&55 THEN x=5
FAJB 1200 IF d=&44 THEN x=4
FAHB 1210 IF d=&33 THEN x=3
FAFB 1220 IF d=&22 THEN x=2
FADB 1230 IF d=&11 THEN x=1
EABO 1240 IF d=&0 THEN x=0
DANA 1250 PRINT x
MAMN 1260 IF INKEY(0)=0 AND a)1 THEN a=a-1:n=n-1:GOTO 1110
NABB 1270 IF INKEY(2)=0 AND a(45 THEN a=a+1:n=n+1:GOTO 1110
NAMN 1280 IF INKEY(8)=0 AND d)1 THEN d=d-17:POKE n,d:GOTO 1110
OAHD 1290 IF INKEY(1)=0 AND d(&88 THEN d=d+17:POKE n,d:GOTO 1110
GAHE 1300 IF INKEY(58)=0 THEN 460
DAHA 1310 GOTO 1260
NAGC 1320 DATA GOLD DRAGON,GREEN DRAGON,RED DRAGON,PIXIE
NAMF 1330 DATA DWARF,GOBLIN,TROLL,GIANT,CENTAUR,UNICORN
NAAN 1340 DATA PEGASAS,GRYPHON,ELEPHANT,GORILLA,LION,BEAR
OAFH 1350 DATA CROCODILE,GIANT BAT,HARPY,GIANT SPIDER,ZOMBIE
OAOF 1360 DATA GHOST,VAMPIRE,SPECTRE,DEMON,STRENGTH POTION
ABNC 1370 DATA POTECTION POTION,INVISIBILITY POTION,SPEED POTION
NAJL 1380 DATA FLYING POTION,SUPER POTION,HEALING POTION
MAEN 1390 DATA MAGIC FLAME,GOOEY BLOB,TANGLE VINE,FLOOD
MAPG 1400 DATA ENCHANT,SUBVERSION,CURSE,MAGIC ATTACK
OAOE 1410 DATA MAGIC BOLT,MAGIC LIGHTNING,TELEPORT,MAGIC EYE
FALF 1420 DATA MAGIC SHIELD
MADC 1430 FOR n=1 TO 45:READ spell$(n):NEXT:RETURN
EAFM 1440 'Directory
DBAH 1450 PRINT "Please insert disc in drive and press any key!"
DAKD 1460 CALL &BB18
DAGD 1470 CALL &BF00
 CAJI 1480 k=&8033
EAGB 1490 FOR n=1 TO 20
DAMD 1500 PRINT n;
EAKB 1510 FOR x=1 TO 12
DAHG 1520 a=PEEK(k)
EAEI 1530 PRINT CHR$(a);
CAJF 1540 k=k+1
CAKC 1550 NEXT
CANN 1560 PRINT "."
CAMC 1570 NEXT
EADA 1580 POKE &BF02,&40
CAPM 1590 RETURN
DAAA  330 CALL &BF00
BAFP  340 ld=1
CAJH  350 GOTO 80
CAPA  360 'SAVE
ABHA  370 IF ld=0 THEN PRINT "Nothing loaded": CALL &BB18:GOTO 50
JAKA  380 INPUT "Are you sure (Y/N)";a$
EAOP  390 IF a$()"y" THEN 80
DAAP  400 POKE &BF0D,&3F
FAJF  410 POKE &BF06,track
DAAA  420 CALL &BF00
CAIH  430 GOTO 80
CAFA  440 'EDIT
PAGO  450 IF ld=0 THEN PRINT "Nothing loaded";
```

Are you befuddled by listings?

Don't panic if you're new to listings. There's a full explanation of how to type in the darned things and what the four-letter codes at the beginning of each line mean in the Type-Ins section which starts on page 28.

The Manic multipoke mania zone

Relatively few Multiface Pokes this month, but don't worry because they'll be bouncing back with a vengeance next issue. Peter Curgenven is our lone poker this month. If you want to impress the nation with your poking prowess, send your game-busting slices of code to Cheat Mode, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, BA1 2BW. It could the start of something big (but then again, maybe not).

Game	Format	Poke, Address	Effect
Everyone's A Wally	Tape	81E1,A7	Infinite lives
Xarq	Disc	2BE4,C9	Infinite weapons
Aftermath	Tape	8AB2,FF	Infinite ammo
Xcel	Tape	33A4,00	Infinite shuttles
		4C2A,00	Stops timer
3DC	Tape	290E,00	Infinite oxygen
Dragons	Tape	6465,00	Infinite lives
Haunted Hedges	Tape	8727,00	Removes ghosts
Subterranean Stryker	Tape	7D26,30	Infinite lives
Captain America	Tape	9D2D,30	Stops clock

Poking the multiface way

1 Make sure you've got a Multiface plugged into the back of your CPC – it helps.
2 Load the game as normal.
3 Press the RED button on the Multiface.
4 Press 'T' for tool.
5 Press '*' to select the code.
6 Press 'H' for hexadecimal input.
7 Press SPACE for input.
8 Type in the address (ie, 3A7C).
9 Type in the POKE (ie, A7).
10 Press RETURN.
11 If there's more than one poke go back to seven.
12 Press ESC to get back to the menu.
13 Press R to return to the game.

READER ADVERTS

Bargains galore and much, much more in the CPC second-hand superstore. Or, in other words, here are the small ads...

For sale

Home-grown machine code games from strategy to Shoot-em-ups. Good graphics and playability. £2.99 plus disk or £4.99. For information send SAE to Kevin Heywood, 18 Sinclair Avenue, Banbury, Oxon OX16 7DW

Amstrad CPC464 computer, green screen monitor, joystick, users manual and games. vgc £50 Tel: 0353 861728 (Ely).

Amstrad CPC 6128 colour monitor, disk drive, manual, many games including Street Fighter, Nigel Mansels GP, Joystick, home accounts, clip art, system disks and mags. £100. Tel:0332 345017.

Amstrad CPC464 with colour monitor, DDi disk drive, mouse, multiface disk and tape software/games. Good condition and with all manuals £150 ono. Alan, 061 797 8402.

Amstrad CPC6128 with manual, over 70 games, 40 utility programs and 20 other programs. All games boxed and in mint condition, over 30 mags $450 ono. Tel: 0748 834295.

Amstrad 6128, disk drive, colour monitor, joystick, games and Star LC2410 printer. All vgc and just £200! Call Colin or Joyce – 0621 859706 (Essex).

Amstrad CPC464, colour monitor, joystick, approx 10 games and games rack, 4 AA's with tapes, manual, £150. Tel: 0384 891833 (Sat & Sun only between 4-7pm).

16 Classic games for sale including Wizball, Wonderboy, Fiendish Freddy. Only £25 inc P+P (UK only). Caroline – 0222 628208.

Amstrad 464 with monitor, disk drive and over £200 of software for just £150! will consider splitting. Tel: 0243 543292.

Amstrad 6128+, tape upgrade, colour monitor, 60 games on tape/disk, Supercall, Protex, Procopy, Locksmith, joystick and more £200! Second DD 3.5 duel just £50! Wolfgang – 0652 653631.

464 with 6128 chip, disk drive, multiface, 64k RAM, OCP Studio, Music Machine, 200 games, AA mags 61-98, Insider, mouse, books. Basically £1000 worth of 6128 for just £320! Chris Beach – 0789 470686.

Nine Sega Game Gear games inc Super Off-Road, Halley Wars, Golf, all boxed, vgc and with instructions just £12 each ono. Tel: 061 969 1847 after 4pm.

Amstrad DMP2160 printer (inc manual) with broken head! Also DMP 200, 4 unused ribbons, AA complete cheat collection book, Mastertronic Master Chess tape and some games. Phone Gerald on 0762 331054 .

CPC6128, colour monitor, tape deck, joystick, lightpen, over 30 AA's plus tapes, many original games and three programming books, £280 the lot! Tel: 0354 740882 after 6pm.

Amstrad CPC464, 64k, over 200 games including Hudson Hawk, T2 and Predator. Worth about £450 will accept £321! Dean – 0543 418494.

Joystick Cheetah Bug, boxed and unused £8. Multiface boxed, manual, just 2 months old, bargain at £20. Amstrad TV Tuner will convert colour monitor into TV £18! P+P £2. Tel: 0376 519360.

CPC6128, colour, extra disk drive, Rombox with Rodos, RS232, Joystick, Soft 968, games, mags, books, utilities and spare disks. £350! Ring 0296 630250 for details. Also a DMP2000 which has a broken leg but still works....

Amstrad boxed, green monitor GT65, around 20 3" disk games worth about £60, but £30 for a quick sale!!! Guildford area. Tel: 0483 233392 after 5.30pm.

Multiface II £15, Supercauldron disk £10, large selection of other goodies, games on tape and disk, stuff, AA mags, utilities! Write to David Platt, 54 Fore St, Buckfastleigh, S Devon. (Surely not..... Nah!..)

CPC6128 colour, CPC464 mono, DMP2000 printer, MP1 modulator, Prom Programmer, Rom Board, cassette cable, Soft158 Firmware Specification, Soft157 Basic Specification, Mini Office, DevPac, books. Offers invited on any item. Tel: 0734 734143 (Wokingham).

CPC hardware/software for sale. RS232, Firmware guides, ROM's, books, system disks, serious software and games. Send SAE to J Carter, 4 California Gardens, Little America, Plymouth PL3 6SZ

CPC464, colour monitor, Multiface II, Rom-Board, with Protext and Maxim 1.5, Stereo amplifier with speakers, joystick, approx 100 tapes, 195 mags, books including Soft 968. No splits! Offers! Steve – 0367 244517.

Advanced programming book on the 464 £5. Also list of games available from Dee Singer, 57 Kent Rd, Parkfields, Wolverhampton, WV2 2BB.

Amstrad CPC664, colour monitor, Rom-Board, unfitted 6128 ROM, Maxam on ROM, Firmware manual, Masterfile, Microscript, various games and books, £130!!. Tel: 0704 565828 (southport).

Amstrad CPC464 – 116 games, many AA mags £95. Tel:0525 861115.

I will sell Batman, Ghostbusters, Double Dragon, The Real Ghostbusters, Quattro adventure and Joe Blade II (no cover!) for just £1 each (all CPC464)! Or I will swap any 2 for Moonwalker, or any 3 for Thunderbirds (must be in good condition). Tel: 0723 863815.

Many games, discs and cassettes, some magazines. Send wants list or SSAE for full list. Reasonable prices for varied titles. SR Laurie, 29 Prior's Hardwick Road, Upper Boddington, Northants, NN11 6DW.

Multiface Two, £25 plus P&P. AMX Mouse and Stop Press £40 plus P&P. The Insider £5 plus P&P. 30 3-inch discs £30 plus P&P. Light Gun plus 10 games £25 plus P&P. Tel 0302 864730.

Star LC24-10 24-pin printer in perfect boxed condition. £100 plus P&P. Tel 0302 864730.

OTHER

Contacts wanted. Any age, sex or country to exchange tips and games on the 464. Cassette only. Contact David Dodds, 49 Hassesdean Road, Blackhealth, London SE3 8HR. All replys answered.

Software wanted for new PD library. It can be anything from adventure games to shoot-em-ups. Send to s Saunders, 138 Woodbridge Road, Ipswich, IP4 2NS. Can be tape or disc.

Amszine: a new amstrad fanzine. Reviewed AA99. Only £1. Issues 1 and 2 available now. Phone Jonathan on 0663 744863 for details.

3D adventure with Alfa 117, a new dimension for £7.95 inclusive or £3.95 plus a 3-inch disc supplied by you. Cheques to Paul Williams, 8 Heather Close, Worcester WR5 3LX.

New Dimensions – fanzine of science fiction dedicated to SF on TV and satellite. For second issue send 60p and stamped addressed envelope to 15 Hinsley Drive, Wrexham, Clwyd LL13 9QH.

Please send PD on tape/disc for tape PD/disk PD respectively to Lower Dexbeer, Dexbeer, Holsworthy, Devon, EX22 7LA. For disk PD's newsdisc send a disc and an SAE to the same address.

Want to buy a new computer, over 18? Then we'll pay you for your thoughts. Want to know more? Send for a free brochure. No obligation. KA, 16 New Watling Street, Leadgate, Consett, Co Durham.

Impro graphix (not PD). Allows you to improve the graphics of your Amstrad and remove borders. Send £1.50 and disc/tape to: A Payne, 89 Wolverhampton Road, Codsall, Wolverhampton, WV8 IPL.

USER GROUPS

WACCI, the UK's most popular CPC club. To find out what it has to offer send a 29p stamp to: WACCI, 7 Brunswood Green, Hawarden, Deeside, Clwyd CH5 3JA.

New! Another World, a new disczine covering serious and PD. Free PD. Send £1.30 plus disc plus SAE to 35 Marlborough View, Cove, Farnborough, Hants GU14 9YA. Make cheques/POs payable to R Avery.

Wanted. PD/Homebrew/shareware software for review in Another World. Also wanted fanzines for review. Send programs/fanzines to reviews to Another World, 35 Marlborough View, Cove, Farnborough, Hants, GU14 9YA.

SERVICES

Clip Art. Lots of original designs to add professionalism to your work. Send blank formatted disc and SAEplus 50p to 10 Meadows Road, Cheadle Hulme, Cheadle, Cheshire SK8 6EJ.

Colour Map of Auf Wiedersehen Monty. Just send two 25p stamps or send SAE for list of original tape games for sale to Angela Allum, 22 Point Royal, Bracknbell RG12 7HH.

CPC Trekking. New fanzine offers reviews, letters and coverdisc. Cheques to: SA Sandhu. Include 3-inch disc for coverdisc. Only £1.50. Great games on coverdisc. Orders to 17 Cromer Road, London SW17 9JN.

An A-Z of games and graphics for sale. Programmed listings and some from 1986 to 1994. IE, CWTA and Amstrad Action. Send SAE to Chris for list. 188 Colchester Road, Leyton, London E10. 081 556 6919.

15p per disc per side. That's right. Power PD now charge only 15p per selection. Order a catalogue now! Send SAE to Richard Wild, 33 East Lane, Sandiway, Norwich CW8 2QQ.

WANTED

Wanted urgently: AA 87. I'll give issue 99 for it (covertapes for both). Phone Alastair on 08284 483 after 5pm please.

Matthew Gullam of Presto PD to Kindly return my order placed with him last October. I would have appreciated an answer to at least one of my letters. Steve 081 669 7792.

Wanted, Horsein Around – stables edition, Millionaire and Fruity Frank. Cassette only. Willing to pay £10 for each. Please write to Andy Hudson, 5 Trocadero Court, Normanston Road, Derby DE1 2GR.

Heroquest and Football Manager One. Will swap for Midnight Resistance, Turbo Tortoise or Afterburner. All cassette. Wanted for CPC464. Write to Lee Cleary, 20 Acacia Avenue, Maltby Nr Rotherham, South Yorks S66 8DS.

ORDER SEND TO: SMALL ADS, AMSTRAD ACTION, 30 MONMOUTH STREET, BATH, AVON BA1 2BW

Please place the following advertisement in the next available issue of *Amstrad Action*

Name _____

Address _____

_____

_____

FREE READER ADS!

It's true – you can advertise in Amstrad Action for NOTHING! It's all part of our continuing efforts to provide you with the best value magazine possible.

Classification. Tick box: ❑ For Sale ❑ Wanted ❑ Services ❑ User Groups ❑ Other

Write your advertisement here, one word per box. Include your name and phone number if you want them printed.

Reaction

Send your letters to: Reaction, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath BA1 2BW

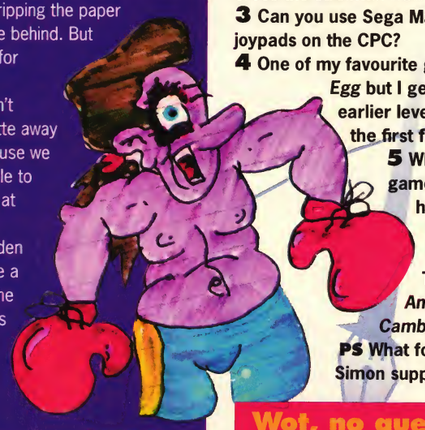
Sticky problem

Hiya guys, remember me? Look no breasts this time. Anyway the reason for my scribbling – why, oh why does the most brilliant mag around persist in sellotaping its covertape to the outside of the mag?

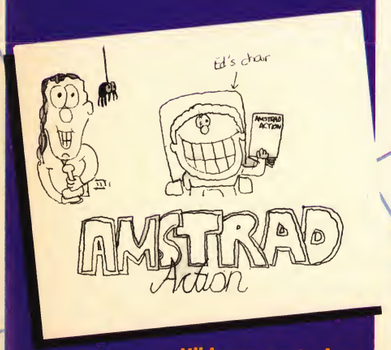
Why not slip in a blank page inside to stick the covertape on to? Or even half a page on the outside. It totally ruins the mag having to cut the tape away and so leaving unsightly pieces of tape behind.
John Jones, Northumberland.

PS Any witty remarks, Dave, and I'm ready and waiting for ya!

Yes, it is a pain trying to get the tape off the cover without either ripping the paper or leaving bits of tape behind. But it's the price we pay for having covertapes, unfortunately. We can't really hide the cassette away inside the mag, because we want people to be able to see it on the shelves at their newsagents. Besides, if it was hidden away inside it'd cause a bulge that'd crease the pages when the mags were packed together for transport or display on shelves. Besides, 'insidetapes' isn't a very catchy name. And I'm really not sure about a blank half-page on the outside – wouldn't that be just as unsightly as a couple of bits of tape? Anyway, how'd you like the new cassette boxes? Smart, eh? **Dave**



Breats or not? It's up to you to decide.



I'll leave you to draw your own conclusions, though hopefully not more picturtes like this.

To whom it may concern

I was recently given a second-hand CPC464 with lots of games. I found it excellent to use but as I'm not very experienced with computers I've got a few problems for you.

1 I can't load *4 Quattro Sports* by CodeMasters. I can get it to run but the computer always responds with MEMORY FULL. How can I open up some extra memory space?

2 On *Yogi Bear* I can't jump far enough to cross the streams. How do I do this?

3 Can you use Sega Master System 2 joypads on the CPC?

4 One of my favourite games is *Chuckie Egg* but I get bored doing the earlier levels. How can I skip the first few?

5 What's the best soccer game I can easily get hold of?

6 Should question one be directed at Techy Forum?

Anthony Saunders, Cambridgeshire.

PS What football team does Simon support?

1 See answer six.
2 See answer six.
3 You surely can (we tested this one ourselves in the office).
4 See answer six.
5 Check out our sports sim round-up.
6 Yes, and questions two and four should have gone to Cheat Mode, really. Don't worry, I'll pass them on. And from next issue we'll be introducing a new section to Cheat Mode specifically to deal with individual queries like this which'll be called... er... we're not sure what yet. We would start up a similar section in Technical Forum, but that's what Techy Forum is anyway.

Welcome to AA, by the way. **Dave**

PS Leicester City, the poor sap.

Letter from the colony

1 Corker mag, but how about a wargame on the covertape soon?

2 I think maybe a discography of major software houses is in order.

3 Loopy Lou's a fine Sheila *(yup – he's definitely from New Zealand – Dave)*, let's have her on the cover, eh? She inspires any man to poetry.

4 Some great servers of the CPC are GDPD, The Vault, Wizard Games and Romantic Robot.

Wot, no questions?

Why is it that whenever people write in to you they just write a list of questions? Can no-one out there write in continuous prose? Are you all illiterate, uneducated buffoons that don't know the meaning of the word paragraph?

I am a member of an insubordinate organisation called The Brotherhood of the Eternal Whisper. Never heard of us? Well you have now. We are an underground resistance movement fighting against repression, suppression, dictatorship, capitalist scum, so-called democracy and other such stuff. We defend the weak, support the poor, give courage to the downtrodden and uphold the true American way. So you can imagine our disgust when the news came through to our headquarters (a bin in the boys' toilets at Dalriada School, Ballymoney) about *Street Fighter 2*. We have therefore decided to add this to our cause and are willing to lend our support to any local group.

We are at present only a small group but our support is growing daily and with your support and media coverage we can realise our goal and seize power in 1996.
Dwylan Daverous (the official letter writer), Ballymoney.

PS Power to the people, power to the nation, power to the human race, power to the CPC.
PPS Thank you.
PPPS We all think you're great.
PPPPS Our leader thinks Clur is the most beautiful thing he's ever seen.
PPPPPS I worry about his health.

This could be the start of something big, but somehow I doubt it. **Dave**

It's just a pity Clur's wandered off to bring up a family.

Dear AA SHORT SHARP SHOCKS

How about doing a list of all the rubbish games? It'd be better than doing all the good ones?
Christopher Hill, Colchester.

That's an idea I like, but perhaps not a list of all the rubbish games – that'd take up a whole issue. The Top 50 all-time turkeys sounds good. Write in and let us know what you reckon are the games that deserve a thorough vilification. **Dave**

Is the cut-down version of DES on disc any good?
Christopher Hill, Colchester.

Yes – about as good as you'll get on a disc version anyway. **Dave**

Could you please continue the Trump cards and Separated At Birth in the Power-Up section?
James Moyse, Devon.

Yes and no. They're back this issue but not in Power-Up. Check out the new look Next Month page. **Dave**

I would be very interested in a garden planner either on your covertape or to buy if anyone knows of one which will operate on the CPC6128.
Word Processor Fentiman, Birmingham.

Blank faces in the AA office, I'm afraid, so this is one that we'll have to throw out to you lot. Can anyone help WP? **Dave**

My friend wants to know where Simon gets his hair done.
Stephen Fraser, Dunfermilne.

Your friend, eh? Oh well, tell your 'friend' that Simon won't trust anyone else to attack his locks with sharp implements, so the big jessie does the job himself **Dave** *(They're natural curls, anyway – Simon.)*

Has anybody produced a hard drive yet?
Nautilus Greaves, Hants

Surprisingly, yes, but not Campursoft or Quantum, both of whom at one time had hard drives in development. The only CPC hard drive that was ever actually commercially available was produced in Germany and cost around £140 but only had the measly storage capacity of 16MB, I believe. If anyone else has anymore details about this hard drive, or has the drive itself, we'd love to hear from you. Failing that, who wants to write a hardware project so that you can use a PC hard drive? **Dave**

5 If any New Zealand CPCers want some great PD send an SAE to the address at the end of this letter. No copy charge.
6 Long live the CPC and may the psychopathic fans of Metallica perish in a storm of jam tarts and ZX81s.
Daniel, 32 Killarney Avenue, Torbay, Auckland 10, New Zealand.
PS This was letter written at Heathrow – groovy, eh?

1 Hopefully the rather splendid *North and South* will be appearing on a covertape soon. Will that do for you?
2 Hmm, not sure about that one.
3 Loopy's a star, there's no doubt about that.
4 Let's all solemnly raise our glasses to these stalwart suppliers.
5 You heard the man.
6 Ah, but what about the non-psychopathic fans of Metallica? They're the one's you really need to watch out for. **Dave**
PS No.

So the Parrot listing was ripped off? You'd better be off home then, lads. Funny that the guy who spotted it came from Peckham...

Not our type

I really do think it's time to put a stop to people sending in type-ins as their own work and expecting some financial reward. If a type-in is genuinely a reader's own and original work, that's okay. But if it's a repeat program – albeit slightly altered – then it should not be claimed his own work and he definitely should not get anything financially, only a kick up the back side. I refer to *Parrot* on page 33 of issue 102, sent in by Ray Collins. Perhaps Mr Collins hopes that no other Amstrad user has the book Sensational Games For The Amstrad by Jim Gregory, published by Granada in 1984, a selection of 24 exciting games plus other listings. Lo and behold, if you turm to page 125 there you will find listing number 18 – you've guessed it – Parrot. I have been suspicious of many past listings, but this one really got to me, I felt I just had to write in.
Frank Briggs, Peckham.

We don't actually give away any prizes for any listings that are printed anymore, Frank, but in theory I agree with you wholeheartedly. When we did pay out money, sending in somebody else's work was tantamount to software piracy. Now it's just plain dishonest. Unfortunately neither Simon or myself have encyclopedic knowledge of programs on the CPC so some type-ins do get past. Sorry about that. But the type-ins section has now changed in emphasis slightly anyway, and Simon chooses the type-ins which are printed for their programming expertise or some well-written routines they use, as opposed to the quality of the end product. That's what the purpose of the workshop box-outs is (okay, I know there aren't any this month owing to lack of space but they'll be back). So Type-Ins is now a forum in which programmers can show off their talents. And what's the point in showing off somebody else's? **Dave**

We love WACCI (honest)

Further to your comments regarding WACCI on page 9 of issue 101, I would like to comment as follows:
I have only been a computer user (Amstrad 6128) for the last couple of years so I am still a beginner. At a friend's recommendation I joined WACCI. They have been a tower of strength to me particularly Clive Bellaby who has helped me on numerous occasions; he came to my house and repaired my keyboard, he answers all my telephone queries with the utmost patience and whenever I have needed anything new, he has either obtained it for me at a reasonable price or told me where to obtain it. WACCI has saved me a lot of time and money. This group has kept me interested in learning and encouraged me to keep trying. So I think your comments are most unfair.
Apart from that one little moan, Keep up the good work.
Angry Reptile Hardwick, Walsall

Let's get this straight – *AA* thoroughly, wholeheartedly and unreservedly recommends WACCI to anyone who is seriously into the serious side of their Amstrad. It is a great user group that serves its members superbly, and we have never disputed this fact. AA and WACCI get along fine (hi, Clive). Occasionally, though, they take little swipes at us and we take little swipes at them, but as I said last issue, we never took these things seriously. So sorry for any offence caused, but surely there's some room for some friendly rivalry? Can we drop this now, please. **Dave**

SIMON AND CLUR ARE THICK!

With regard to the problem you were having with the loader for Graph Master (AA102), if Simon and Clur really wish to know what is wrong, may I suggest that line 270 is altered to LOWER$(INKEY$), line 290 is deleted and line 310 is amended to f$="!GM"+ x$.
GM1, GM2, etc, do not understand the hexadecimal for !, ", #, $, %, etc.
Deflated Spacecraft Anthes, Dorset.

I refer to the 464 Owners Beware comment relating to the problem associated with the working of the MENU program on tape 36.
I am unable to explain it, but I found that by altering each of the titles GM1, GM2, GM3, etc to G1, G2, G3, etc and also amending line 310 of the MENU program itself so that "GM"+ became "G"+ and then resaving, the problem disappeared.
It would appear that for some completely inexplicable reason created by the MENU program itself the 464 alters the titles GM1, GM2, etc to read GMG and cannot therefore find what it is searching for. The problem must result from the program itself, because on running the BASIC lines:
10 f$="GM1" (or GM2, or GM3, etc)
20 run f$
the associated miniprog loads and runs quite correctly as you will no doubt have found. A weirdo.
Amplified Mandarins Drake, Newcastle Upon Tyne

Yes Simon and Clur are thick. Well, it's not their fault. Owing to a bug in Locomotive BASIC 1.0 (only used on the 464) you can't use RUN f$ directly. So change it into uppercase or use any other function on it, eg, RUN UPPER$. Problem solved.
David Long, Demon PD

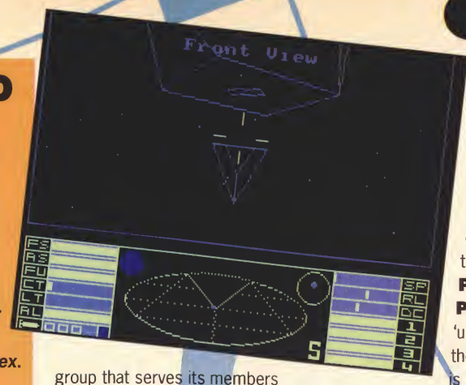
Last month I was skint so I borrowed the *AA* covertape. I was amazed to find that the menu wasn't protected, as usually the menus are. When my mate Frank told me that the menu didn't work I had to find out why, but for the life of me I couldn't figure out why. I have just one thing to ask – why do you protect the menu system anyway?
Adam Cartwright, Lincolnshire.

The reason the menu didn't work for 464 users was because of a bug in the 464's version of Locomotive BASIC, making it incapable of handling the RUN f$ line. I agree with you about the protection thing, though, as I haven't protected a single loader yet – you couldn't list my earlier loaders because they were in machine code, not BASIC. **Simon**

READERS' TOP 10

1 *Elite*
2 *Prehistorik 2*
3 *Super Cauldron*
4 *Titus The Fox*
5 *Lemmings*
6 *Rick Dangerous 2*
7 *Purple Saturn Day*
8 *Smash TV*
9 *Emlyn Hughes International Soccer*
10 *Italy 1990*
Napoleon Bonaparte, Billinghurst, Sussex.

Right, from now on, if you just give us your initials, or, even worse, you don't give us your name at all, we'll make one up. You have been warned. Great Top 10, by the way, Boney. **Dave**

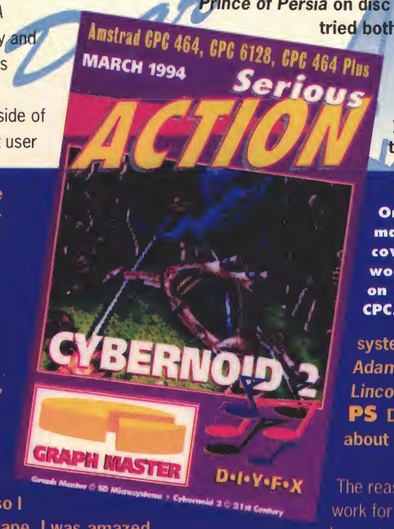


Have you seen this disc?

I have an old AA covertape (from around about issue 19) with Type-Ins and a Sugarman loading screen on one side and a *Tasword*-compatible spellchecker on the other side. Can you please tell me under what filename it runs and how you use it with Tasword?
Julian Grumbridge, Birmingham.
PS may I add that I have been an avid reader of your magazine since issue 16 and it has never been better than it is today.
PPS Also I have been trying to get hold of *Prince of Persia* on disc for ages – I have tried both mail order and other retail outlets but have been unsuccessful. Can you help me with this too?

We're really sorry about this, but we're a bit confused. There was no spellchecker on a covertape around issue 19 and back in those days we never offered tape-to-disc transfers anyway. Our second thought was that you might mean covertape 19, but that didn't have the programs you mentioned on it either. Feel free to send us a copy and we'll try to sort this out for you. **Dave**
PS Gee shucks, thanks.
PPS Normally my answer to this one would be, 'use our Reader Ads service' (see page 46), but there is a problem in this case. *Prince of Persia* is such a good game that nobody ever wants to sell it (except for me, I find it really boring). Then again you might be lucky and find some traitor who's trading in their CPC for some other computer who has a spare copy of *PoP* up for grabs. Give it a try.

***Prince of Persia*, everybody loves it, except Dave who falls asleep at the mention of it.**



One day we'll manage to create covertape that works completely on every model of CPC. One day.

POETRY CORNER

The Amstrad world's on its last legs,
Or so the softies think.
But never fear, 'cause Fegg is here,
About to raise a stink.

How dare they not write *SF2*,
Upon the CPC,
When everyone like me and you
Would buy it instantly?

So listen up, here's Feggy's plan
To make them all take note:
We gather every Gremlin man
And kick them in the throat.

We'll get the guys from US Gold
And halve them down the middle,
If Ocean don't do what they're told
We'll roast them on the griddle.

And finally – this is no joke –
A plan that's quite bizarre,
We'll bring out AA's Hairy bloke,
And loose him on guitar.

And e'en if they chop off their ears
As Simon plucks and strums,
Our secret weapon then appears,
Dave Golder on the drums.

Doctor Fegg, Hiding from the police in the Venezuelan foothills

Future Publishing Limited,
30 Monmouth Street,
Bath, BA1 2BW
Tel: 0225 442244
Fax: 0225 446019

Editor Dave Golder
Art Editor
Ollie "haven't I been here before?" Alderton
The Happening Simon Forrester
Contributors Richard Fairhurst, Debby Howard, Lee Rouane, Rod Lawton and Keith Woods
Cover photography by
Ashton James

Ad Sales Executive Robert Bennett
Not quite a publisher Jim Douglas
Publisher Colin Campbell
Heavenly Being Greg Ingham

Production Lisa Read
Lino and Scanning Simon Chittenden, Jon Moore, Chris Stocker, Simon Windsor, Jason Titley, Mark Gover, Brian Hook
Ad Design Cherry Coad
Tel: 0225 442244
Circulation Manager Jon Bickley,
Tel: 0225 442244

© **Future Publishing Ltd 1994** *Amstrad Action* is an independent publication. The company producing it – Future Publishing Ltd – has no connection with Amstrad plc. We cannot guarantee to return material submitted to us, nor can we enter into personal correspondence. We take great care to ensure that what we publish is accurate, but cannot be liable for any mistakes or misprints. No part of this publication may be reproduced in any form without our explicit written permission.

Printed in the UK

Future PUBLISHING

'Your guarantee of value'

This magazine comes from Future Publishing. Here's what we can offer you:

Better advice. Our titles are packed with tips, suggestions and explanatory features, written by the best in the business.
Stronger reviews. We have a cast-iron policy of editorial independence, and our reviews give clear buying recommendations.
Clearer design. You need solid information fast. So our designers highlight key elements by using charts, diagrams, summary boxes, annotated photographs etc.
Greater relevance. At Future, editors operate under two golden rules:
• Understand your readers' needs.
• Satisfy them.
More reader interaction. We draw strongly on readers' contributions, resulting in the liveliest letters pages and the best reader tips. Buying one of our magazines is like joining a nationwide user group.
Better value for money. Magazines you can trust.

Home of Britain's finest magazines.

Commodore Format • PCW Plus • PC Gamer • PC Plus • PC Answers • PC Format • Amiga Format • Amiga Format Specials • ST Format • Sega Power • TOTAL! • Amiga Power • Amiga Shopper • Super Play • Mega • GamesMaster • Mac Format • Edge • Future Music... and also Classic CD • Mountain Biking UK • Cycling Plus • Needlecraft • Cross-Stitch Collection • Caravan Plus and many more

Amstrad Action recognises all copyrights contained in this issue. Where possible we have acknowledged the copyright holder. Please feel free to contact us if we have failed to credit your copyright – we will be happy to correct any oversight.

ABC 15,168
Member of the Audit Bureau of Circulation Jul '93 - Jan '94

NEXT MONTH

Are you ready for MEGABLASTERS?

You've heard hints, you've heard rumours. Next month get the facts. The amazing multi-player blast-'em-up from Germany will hit our shores soon and AA's where you'll get the exclusive preview. Be here.

Plus: Deliverance on the covertape, extended games tips coverage, a joystick splitter hardware project, and all the usual features. And it's coming out on...

Thursday 19th May 1994

SEPARATED AT BIRTH?

Blanka from Street Fighter 2

Jack Nicholson from Wolf

Jolly Jack goes into method mode for his new stateside film *Wolf* (it'll be here soon) but we reckon that the erstwhile Joker would be a dead ringer for the big guy Blanka in a *Street Fighter 2* film.

Do you know of anyone who looks like a famous games character? Send your suggestions to: Separated at Birth, Amstrad Action, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

DATEL Electronics

NOW A TOTAL MOUSE/ GRAPHICS PACKAGE FOR YOUR AMSTRAD AT A TRULY UNBEATABLE PRICE!!

Genius Mouse
COMPLETE WITH OCP ADVANCED ART STUDIO

SPECIAL OFFER PACK!!

- **Genius Mouse is a high resolution two button mouse featuring optical counting, teflon guides, microswitches, rubber coated ball and high quality interface.**
- **When combined with OCP Advanced Art Studio this graphics package is quite simply the best system available. The features are unmatched...**
- Create an image - shrink it, expand it, move it, rotate it, copy it, colour it, etc., etc.
- Spray patterns or shades, make elastic lines - stretch and manipulate shapes.
- Zoom in to add detail in fine mode. • Full cut and paste facilities plus excellent printer support.
- Pulldown/Icon driven menus for ease of use. • Mouse operation, plus joystick and keyboard control.
- 16 pens, 8 sprays, 16 brushes - so flexible anyone can create superb graphics easily.

TAPE OR DISK FOR 464 OR 6128 (PLEASE STATE WHICH REQUIRED) N.B. 464 NEEDS DK'TRONICS 64K RAM PACK

COMPLETE WITH MOUSE INTERFACE

- The Genius Mouse Graphics System comes complete with the special Mouse Interface to allow super smooth control.
- Attractively styled to match your 464 or 6128 design and colour. Simply plugs into Expansion/Joystick port.

ONLY £49.99
TOTAL PACKAGE INCLUDES GENIUS MOUSE, INTERFACE, OCP ADVANCED ART STUDIO PLUS FREE MOUSE MAT AND HOLDER

FREE!
MOUSE MAT AND MOUSE HOLDER
(WORTH £12.99) WITH EACH PACKAGE

NEW

LC 200 COLOUR PRINTER PACKAGE

NOW YOU CAN PRINT OUT YOUR PICTURES IN FULL COLOUR!

- The Star LC200 Colour Printer not only prints in Near Letter Quality for your regular jobs but also prints out your pictures from Art Studio, etc., in genuine colour!
- LC200 is a full Centronics printer so it works with other computers (Amiga, ST, etc.).
- Made possible by Datel's unique colour printer driver - now you can have a hardcopy in up to 16 colours!! • No more to buy - just plug in and print!!

PACKAGE INCLUDES... STAR LC200 COLOUR PRINTER RRP £299.00
CENTRONICS PRINTER LEAD RRP £9.99
DATEL COLOUR PRINTER DRIVER SOFTWARE RRP £19.99
NORMALLY £327.98
COMPLETE PACKAGE NOW ONLY £239.00

COLOUR PRINTER DRIVER AVAILABLE SEPARATELY ONLY £19.99
- If you already have an LC10 or LC 200 Colour Printer we can supply the Driver separately.

dkitronics

- Simple plug in memory expansion gives instant extra memory.
- Features bank switching software for easy use by the programmer or for use as a data storage area.
- Ideal for use with the CPM 2.2 etc.
- The software also features some extra BASIC commands.
- 64K unit expands 464 to 128K.
- 64K unit brings 464 up to CPC 6128 memory configuration making a much larger software base available. Will work straight off with many programs designed for this unit (including OCP Art Studio - see Ad.).
- Bank switching done automatically by software (cassette 464).

64K MEMORY EXPANSION

ONLY £49.99 64K FOR 464

DATEL Electronics LIMITED

HOW TO GET YOUR ORDER FAST!
TELEPHONE [24Hrs] 0782 744707 CREDIT CARD ORDERS
ORDERS NORMALLY DISPATCHED WITHIN 48 Hrs. ALL CHEQUES/POSTAL ORDERS MADE PAYABLE TO....
DATEL ELECTRONICS
GOVAN ROAD, FENTON INDUSTRIAL ESTATE, FENTON, STOKE-ON-TRENT, ST4 2RS, ENGLAND. FAX 0782 744292 TECHNICAL/CUSTOMER SERVICE 0782 744324

DATEL LONDON SHOP

222, TOTTENHAM COURT RD, LONDON, W1. TEL:071 5806460

AMS 7